# Usenet Newsgroup Archive: rec.radio.amateur.homebrew

## 2008

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Date span: 2008-01-01 through 2008-12-31

Source text: rec.radio.amateur.homebrew.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 2,366

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

# 1. M.I,5-Persecution ` th e B BC, television a nd radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 08:28:11 UTC
From: vmvfvei@gmail.com
Message-ID: <dy0800010828106348@4ax.com>
Source record: 5788
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-= the BBC, television and. radio -=
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
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The first incident in June 1990 was when. a BBC newsreader made what seemed to be a reaction to something which had happened in my. home, and out of context. of what they were reading. My first reaction was disbelief; nothing of the sort had. ever happened before, the idea that such a thing could occur had not crossed. my mind, yet there was no doubt of what had just taken place. My disbelief eroded. as this recurred time after time. Besides the news, offenders included. shows such as Crimewatch (!), Newsnight, and "entertainment" shows. There seems to be very. little moral understanding among the people who make these programmes; they just. assume they will never be caught, so they carry on without. a thought for the illegality or amorality of what they do. The only time I ever. heard a word raised in doubt was by Paxman being. interviewed by someone else (I think by Clive Anderson). back in 1990; referring to the "watching" he said it troubled him, and when asked by the host. what you could do about it, replied "Well, you could just switch. it off" (meaning the surveillance monitor in the studio).. He clearly didn't let his doubts stand in the way of continued surreptitious. spying from his own or other people's shows, though.

Now you're convinced this is a troll, aren't you?. This story has been the subject. of much debate on the uk.* Usenet newsgroups for over a year, and some readers believe it. to be an invention (it has even been suggested that a group of psychology students. are responsible!), others think it symptomatic of a. derangement of the author, and a few give it credence. Quite a few people. do know part or all of the story already, so this text will fill in the gaps in their knowledge. For. the rest, what may persuade you of the third possibility is that some of the. incidents detailed are checkable against any archives of radio and TV. programmes that exist; that the incidents involve named people (even if. those hiding in the shadows have. not made their identity or affiliations evident), and those people may be persuaded to come out with the truth; and that. the campaign of harassment is continuing today both in the. UK and on the American continent, in a none-too-secret fashion; by. its nature the significant risk of. exposure increases with time.

On several occasions people. said to my face that harassment from the TV was happening. On the first day I worked in Oxford, I spent the evening. in the local pub with the. company's technical director Ian, and Phil, another employee. Ian made a few references to me and said to Phil,. as if in an aside, "Is he the bloke who's been on TV?" to. which Phil replied, "Yes, I

think. so".

I made a number of efforts to find the bugs,. without success; last year we employed. professional counter-surveillance people to scan for bugs (see later) again. without result. In autumn 1990 I disposed of my TV and watched virtually no television for the. next three years. But harassment from TV stations has gone on for over. six years and continues to this day. This is something that many people. obviously know is happening; yet the TV staff have. the morality of paedophiles, that because they're getting away with it they feel no. wrong.

Other people who were involved in the abuse. in 1990 were DJs on BBC radio stations, notably disc jockeys from Radio 1 and other. stations (see the following section). Again, since they. don't have sense in the first place they can't be. expect to have the moral sense not to be part of criminal harassment.

553

## 2. M'I`5'Persecutio n , bugging and count er-surveillance

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 08:55:10 UTC
From: emfvm@gmail.com
Message-ID: <wr0800010855093205@4ax.com>
Source record: 5789
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
-= MI5: bugging and. counter-surveillance -=
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

PO: >Did you ever look for the bugs in your house ? If not, why not ? I. mean if
PO: >I thought that was happening. to me, I'd search the place from top to bottom,
PO: >I mean I live there I would know if anything. was out of place. If I was
PO: >really suspicious, I would call in one of those bug. detection teams which
PO: >have those machines that pick up the transmitted. radio waves. This
PO: >reminds me of. BUGS, that new programme on BBC1 on

That's exactly what we did. We went to a competent, professional. detective
agency in London, paid them over 400 quid to debug our. house. They used
scanner devices which go to over 1 GHz and would pick. up any nearby
transmitter in that range, they also checked the. phones and found
nothing... but if the tap was at the exchange,. then they wouldn't find
anything, would. they?

CS: >Doesn't this suggest to you that. there are, in fact, no bugs to be found?

You can assume that they've done this sort. of thing to other people in more
"serious" cases, where. they would know the targets would suspect the
presence of electronic surveillance. So. they will have developed techniques
and devices which are. not readily detectable either by visual inspection or
by electronic means. What those techniques might be, I couldn't. guess.

In this case, the existence of. bugging devices was clear from the
beginning, and they "rubbed it in" with what was said. by the boy on the
coach. It was almost as if they. wanted counter-surveillance people to be
called in, who they. knew would fail to detect the bugging devices, causing
loss of credibility. to the other things I would have to say relating to the
harassment.

I did all the things someone in my situation would do to try to. find the
bugs.. In addition to calling in professional help using electronic
counter-surveillance, I made a. close visual inspection of electrical
equipment,. plus any points where audio or video surveillance devices might
have been concealed. Of. course, I found nothing. Normal surveillance
"mini-cameras" are quite noticeable and. require visible supporting
circuitry. It seems to me the best. place to put a small video surveillance
device would be additional to a piece of electronic equipment. such as a TV
or video. It would be necessary. to physically break in to a property to fit
such. a device.
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2983

## 3. M I-5 P ersecution ' Capit al Ra dio - Chr is Tar rant

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 09:21:39 UTC
From: evmvfe@gmail.com
Message-ID: <yb0800010921394481@4ax.com>
Source record: 5790
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-= Capital Radio. - Chris Tarrant -=
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

Capital Radio. DJs have been "in on it" from the start. One of the first things I heard in the summer of 1990 was from a Capital DJ who said,. "If he listens to Capital then he can't be all. bad" (supportive, you see. We're not bastards). Much of what came over the radio in 1990 is now. so far away the precise details have been obliterated by time.. No diary was kept of the details, and although archives if. they exist may give pointers, the ambiguity of. what broadcasters said would leave that open to re-interpretation.

In spring 1994, Chris Tarrant. on his Capital morning show made an aside to someone else in the. studio, about a person he didn't identify. He said, "You know this bloke? He. says we're trying to kill him. We should be done for attempted. manslaughter".

That mirrored something I had said. a day or two before. What Tarrant said was understood by the staff member. in the studio he was saying it to; they said, "Oh no,. don't say that" to Tarrant. If any archives exist of the morning show (probably unlikely) then it. could be found there; what he said was. so out of context that he would be very hard put to find an explanation. A couple of days later, someone at the site where I was working repeated. the remark although in a different way; they said there. had been people in a computer room when automatic. fire extinguishers went off and those people were "thinking of suing for. attempted manslaughter".

Finally, this isn't confined to the established radio stations. In. 1990 after I had listened to a pirate radio station in South. London for about half an hour, there was an. audible phone call in the background, followed by total silence for a few moments, then shrieks of. laughter. "So what are we supposed to say now? Deadly. torture? He's going to talk to us now, isn't he?", which meant that they. could hear what I would say in my room.

5413

## 4. M.I 5`Pers ecution - cost of th e oper ation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 09:47:47 UTC
From: imivei@gmail.com
Message-ID: <sb0800010947461431@4ax.com>
Source record: 5791
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
-=. MI5: cost of the operation -=
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
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Here's what a couple of other people on. Usenet (uk.misc) had to say
regarding the cost of. running such an operation...

PO: >Have some sense, grow up and smell reality. What you are. talking about
PO: >would take loads of planning, tens of thousands of pounds and. lots of
PO: >people involved in the planning, execution and. maintenance of it. You
PO: >must have. a very high opinion of yourself to think you are worth it.

PM: >But why? And why you? Do you realize. how much it would cost to keep
PM:. >one person under continuous surveillance for five years? Think about
PM: >all. the man/hours. Say they _just_ allocated a two man team and a
PM: >supervisor. OK., Supervisor's salary, say, #30,000. a year. Two men,
PM: >#20,000 a year each. But they'd need to work in shifts --. so it would
PM:. >be six men at #20,000 (which with on-costs would work out at more like
PM: >#30,000 to the. employer.)
PM:. >
PM: >So, we're talking #30,000 x. 6. #180,000. plus say, #40,000 for the
PM: >supervisor. #220,000. Then you've got the. hardware involved. And
PM: >any transcription that needs doing. You don't. think the 'Big Boss'
PM:. >would listen to hours and hours of tapes, do you.
PM:. >
PM:. >So, all in all, you couldn't actually do the job for much less than
PM: >a quarter million a year. Over five years. What are you doing that. makes
PM: >it worth. the while of the state to spend over one and a quarter million
PM: >on. you?

Those are pretty. much the sort of calculations that went through my head
once I stopped to consider what. it must be costing them to run this
operation.. The partial answer is, there have been periods when the
intensity has. been greater, and times when little has happened. In fact,
for much of. 1993 and the first half of 1994, very little happened. Although
I don't think that was. for reasons of money - if they can tap into the
taxpayer they're not going to. be short of resources, are they?

The more. complete answer is in the enormity of what they're doing. Relative
to the cost. to British pride of seeing their country humiliated for the
persecution of their own citizens, isn't is worth the cost of. four or five
people to try to bring things to a close in. the manner they would wish? To
the government a million or two is quite honestly. nothing - if they can
convince. themselves of the necessity of what they're doing, resources will

not be the limiting. factor.

7843

## 5. M,I`5 Persecu tion h ow an d w hy di d it s tart?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 10:17:43 UTC
From: fievmemfm@gmail.com
Message-ID: <pk0800011017424756@4ax.com>
Source record: 5792
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
-= how. and why did it start? -=
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

The. harassment didn't start by itself, so someone must have been there at the outset to give it a firm push and set the "animals" after me. It. looks as if I was set. up in June 1990, and the timing indicates someone from university was. responsible.

>One thing which has been missing from. this discussion is this simple
>prognosis: that maybe he. is right and that, despite his admitted
>mental condition, there really is a campaign against him. organised by
>now-influential ex-students of his. university.

In May or. June 1990, Alan Freeman on Radio 1 read out a letter from someone who had. known me for a few years, who wrote of the one who "wore out his welcome with random precision" (from the. Pink Floyd song). Freeman went on to say to the writer "that's. a hell of a letter you wrote there". The indication. is strongly that people I had parted from soon before nursed a grudge against me and were trying to cause trouble for. me.

The suggestion is. that Freeman might have shown the letter to other people, and things could have snowballed from there. Right. from the start the real source. (security services presumed) didn't announce themselves as the origin, but let the "talkers", the radio DJs, believe that. they were the originators. Think about it; if you announce,. "we're MI5 and we have a campaign against this bloke" then people. might not go along with it; but if you say, "everyone else is. getting at this bloke because he 'deserves' it" then people will join in. with fewer qualms.

>Why would "they" wish to. assassinate your character?

It's the classic case of hitting a cripple to prove you're stronger.. Why would the security. services expend hundreds of thousands of pounds and more than six years of manpower to try to kill. a British citizen? Because they are motivated by people who knew me at university. and feel personal animosity; because they knew me to be emotionally. weak, and it is in the nature of bullies to prey on those. known to be weak; and because they can rely on the complicity of the. establishment, which the security services manipulate and derive funding from. This. is England's biggest humiliation today, and the British security services are intent on preventing. their humiliation. becoming reality by continuing their campaign of attempted murder to suppress the truth from. becoming public.

10273

## 6. M I`5'Persec ution , ho w a nd wh y did it start ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 10:48:19 UTC
From: fimfefiev@gmail.com
Message-ID: <an0800011048182219@4ax.com>
Source record: 5793
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
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-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

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553

## 7. M-I 5`Persec ution . wh o kno ws abo ut it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 11:44:28 UTC
From: vfeimvevi@gmail.com
Message-ID: <xo0800011144277988@4ax.com>
Source record: 5794
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

-=-=-=-=-=-=-=-=-=-=-=-=-
-= who knows. about it? =-
-=-=-=-=-=-=-=-=-=-=-=-=-

Many people know, both in the. establishment and media, and among the general public. Despite an absence of its target from the. UK for more than two. years, the echoes of paranoia can still be heard loud and clear from across the water. When it started in 1990,. the only people who knew were those. in BBC television who were spying on my home, and a few radio broadcasters. There were a few cases of public harassment, but. very little compared to the situation that developed a. couple of years later.

The list today includes BBC TV staff (newsreaders such as. Martyn Lewis, Michael Buerk, Nicholas Witchell), people from radio stations. such as Chris Tarrant of Capital and. Radio 1 DJs, people in the print media, but also many people in the general public. All united. in a conspiracy which breaks the laws which the UK does have regarding. harassment, and all completely uncaring for any semblance of. decency or elementary respect for individual. rights.

The. British police (obviously) do know the nature of the harassment and in all probability the identity of those behind it.. Some time ago I made a complaint to my local police station in London, without. positive result. The UK police are failing in their duty to see the law enforced in. not checking. the abuse.

2983

## 8. M.I'5`Persecu tion ` B ernard L evin expres ses hi s vi ews

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 12:15:56 UTC
From: iveifmviv@gmail.com
Message-ID: <fu0800011215556388@4ax.com>
Source record: 5795
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

The article of which part is reproduced below was penned by. Bernard Levin for the. Features section of the Times on 21 September 1991. To my mind, it described the situation at the time and in particular. a recent meeting with a. friend, during which I for the first time admitted to someone other than my GP that I had been subjected to a conspiracy of harassment. over the previous year and a. half.

>There is a madman running. loose about London, called David Campbell; I have
>no reason to believe that he. is violent, but he should certainly be
>approached with caution.. You may know him by the curious glitter in his
>eyes and a persistent trembling of his hands; if. that does not suffice, you
>will find him attempting to thrust no fewer than. 48 books into your arms,
>all hardbacks, with a promise that, if you should return. to the same
>meeting-place next year, he will heave. another 80 at you.
>
>If, by now, the. police have arrived and are keeping a close watch on him,
>you may feel sufficiently emboldened to examine the. books. The jackets are
>a model of. uncluttered typography, elegantly and simply laid out; there is
>an unobtrusive colophon of a rising sun, probably not picked. at random.
>Gaining confidence - the. lunatic is smiling by now, and the policemen, who
>know about such things, have significantly removed their helmets. - you
>could do worse than take the jacket off. the first book in the pile. The
>only word possible to describe the binding. is sumptuous; real cloth in a
>glorious shade of dark green, with. the title and author in black and gold
>on. the spine.
>
>Look at it more closely; your eyes do not deceive you -. it truly does have
>real top-bands and tail-bands, in. yellow, and, for good measure, a silk
>marker ribbon in a lighter green. The paper is cream-wove. and acid-free,
>and. the book is sewn, not glued.
>
>Throughout the encounter, I should have. mentioned, our loony has been
>chattering away, although. what he is trying to say is almost impossible to
>understand; after a time,. however, he becomes sufficiently coherent to make
>clear that he. is trying to sell the books to you. Well, now, such quality
>in bookmaking today can only be for. collectors' limited editions at a
>fearsome. price - #30, #40, #50?
>
>No,. no, he says, the glitter more powerful than ever and the trembling of
>his hands rapidly spreading throughout his entire body; no,. no - the books
>are priced variously at #7, #8 or #9, with the. top price #12.
>
>At this, the policemen understandably put their helmets back on;. one of

>them draws his truncheon and the other can be heard. summoning
>reinforcements on his walkie-talkie. The madman bursts into tears,. and
>swears it. is all true.
>
>And. it is.
>
>David Campbell has acquired the entire rights to the whole. of the
>Everyman's Library, which died a lingering. and shameful death a decade or
>so ago, and he proposes to start it. all over again - 48 volumes this
>September and 80 more next year, in. editions I have described, at the
>prices specified. He proposes to launch his. amazing venture simultaneously
>in Britain and the United States, with. the massive firepower of Random
>Century at. his back in this country, and the dashing cavalry of Knopf
>across the water, and no one who loves literature and courage. will forbear
>to. cheer.

At the time this article. was written I had believed for some time that columnists in the Times and other journalists. had been making references to my situation. Nothing unusual about this you may think, plenty of. people have the same sort of ideas and obviously the papers aren't writing. about them,. so why should my beliefs not be as false as those of others?

What. makes this article so extraordinary is that three or four days immediately. preceding its publication, I had a meeting with a friend, during the course of which we discussed. the media persecution, and in particular that by Times columnists. It seemed to me,. reading the article by Levin. in Saturday's paper, that he was describing in some detail his "artist's impression" of that meeting. Most. telling are the final sentences, when he writes, "The madman bursts into. tears, and swears it is all true. And it is." Although I did. not "burst into tears" (he seems to be using a bit of poetic licence. and exaggerating) I did try hard to convince my friend that it was. all true; and I am able to concur with Mr Levin, because, of course, it. is.

At the beginning of the piece Levin reveals a fear of being attacked. by the "irrational" subject of his story, saying. "I have no reason to believe that he is violent,. but he should certainly be approached with caution". This goes back to the xenophobic propaganda. of "defence" against a "threat" which was seen at the very beginning of the harassment. The. impression of a "madman running loose" who needs to. be controlled through an agency which assigns to itself the. mantle of the "police" is also one which had been expressed. elsewhere.

In the. final paragraph of this extract, his reference to Everyman's Library as. having "died a lingering and shameful death a decade or so ago" shows clearly what sort of conclusion they wish to their campaign. They. want a permanent solution, and as. they are prevented from achieving that solution directly, they waste. significant resources on methods which have been repeatedly shown. to be ineffective for such a purpose.

5413

## 9. M`I'5`Persecut ion . Be rnard Lev in expresse s his views

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 12:59:29 UTC
From: memfvfmi@gmail.com
Message-ID: <vk0800011259285188@4ax.com>
Source record: 5796
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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>meeting-place next year, he will. heave another 80 at you.
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>If, by now, the. police have arrived and are keeping a close watch on him,
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>Gaining confidence - the lunatic is. smiling by now, and the policemen, who
>know about such things, have. significantly removed their helmets - you
>could do worse than take the jacket off. the first book in the pile. The
>only word possible to describe the binding is sumptuous;. real cloth in a
>glorious shade of dark green,. with the title and author in black and gold
>on. the spine.
>
>Look. at it more closely; your eyes do not deceive you - it truly does have
>real top-bands and tail-bands, in yellow, and, for good measure,. a silk
>marker. ribbon in a lighter green. The paper is cream-wove and acid-free,
>and the book. is sewn, not glued.
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>in Britain and the United States,. with the massive firepower of Random
>Century at his back in this country, and the dashing cavalry of. Knopf
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>to. cheer.

At the time this. article was written I had believed for some time that columnists in the Times. and other journalists had been making references to my situation. Nothing unusual about this you may think,. plenty of people have the. same sort of ideas and obviously the papers aren't writing about them, so why should my beliefs not be as. false as those of others?

What makes this article so extraordinary is that. three or four days immediately preceding its. publication, I had a meeting with a friend, during the course of. which we discussed the media persecution, and in particular that by Times columnists. It seemed to me, reading the. article by Levin in Saturday's paper, that he was. describing in some detail his "artist's impression" of that meeting.. Most telling are the final sentences, when he writes, "The madman. bursts into tears, and swears it is all true. And it is." Although I did. not "burst into tears" (he seems to be using a bit. of poetic licence and exaggerating) I did try hard to convince my friend that it. was all true; and I am able to concur with Mr Levin, because, of. course, it is.

At the beginning of the piece Levin reveals a fear of. being attacked by the "irrational" subject of his story, saying "I have. no reason to believe that he is violent, but he should certainly be. approached with caution". This goes back to the. xenophobic propaganda of "defence" against a "threat" which was seen at the very. beginning of the harassment. The impression of a "madman running loose" who needs to be controlled through an. agency which assigns to itself. the mantle of the "police" is also one which had been expressed. elsewhere.

In the final paragraph of this extract, his reference to. Everyman's Library as having. "died a lingering and shameful death a decade or so ago" shows clearly what sort of conclusion. they wish to their campaign. They want a permanent solution, and as they are. prevented from achieving that solution directly, they. waste significant resources on methods which have been repeatedly shown to be ineffective for such a. purpose.

553

## 10. M I.5 Persecution w hy won't th e Britis h p olice do thei r j ob and pu t a stop to i t?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 13:34:08 UTC
From: feieifm@gmail.com
Message-ID: <kd0800011334074829@4ax.com>
Source record: 5797
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-=. why won't the British police do their job and put a stop to it? -=
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The. British police obviously do know what is taking place. Besides my interpretations of what individual. officers have said which forces that conclusion, it would be. inconceivable for them to be unaware of something on this. scale.

If they know, then they will know that the. abusers have broken laws in the UK and abroad. Recently the UK. introduced laws against electronic spying which carry a penalty of several years jail if. caught. If the police know illegal harassment. is taking place, and do nothing about it, then they are failing in. their responsibilities.

Last Easter (1995) I went into the. local police station in London and spoke to an officer about. the harassment against me. But I couldn't provide tangible. evidence; what people said, in many cases years ago, is beyond proof, and without something to support my statements I cannot. expect a police officer to take the complaint. seriously.

The current situation with regard to the police is not. one which allows a breakthrough in dealing with the. problem. On the one hand, most individual officers at a local police station may. not know about the ongoing assaults, so a complaint at that level will not yield results.. Yet the police as an organisation do know of the harassment, and they must. be aware that a complaint has been made at a police station. So it. is clearly their duty to take preventative action. against the continuing molestation, but because the criminals are operating on. behalf of a state agency, the police are not carrying. out their duty.

2983

## 11. M'I`5 Persecution , wh y w on't th e Bri tish polic e do t heir jo b an d pu t a st op to it ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 13:45:09 UTC
From: fevfefefm@gmail.com
Message-ID: <zw0800011345082554@4ax.com>
Source record: 5798
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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## 12. M I.5'Pers ecution , wh y won 't t he British pol ice do t heir job an d p ut a st op to it ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 14:11:37 UTC
From: ifvmifivi@gmail.com
Message-ID: <no0800011411367738@4ax.com>
Source record: 5799
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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Last Easter (1995) I went into the local. police station in London and spoke to an officer about the harassment against me. But I couldn't. provide tangible evidence; what people said, in. many cases years ago, is beyond proof, and without something. to support my statements I cannot expect a police officer. to take the complaint seriously.

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## 13. M-I'5-Per secution . abu se in set-u p situatio ns and in publ ic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 14:40:09 UTC
From: mifmfivi@gmail.com
Message-ID: <xq0800011440082190@4ax.com>
Source record: 5800
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-= abuse in set-up situations and in. public -=
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Strangers in the street. have recognized me on sight many times, and shown awareness. of the current thread of abuse. To give you one example, in 1992 I was seriously ill, and a manager at work somewhat. humorously said that "it wasn't. fair" that people were bullying me. A few days later, I attended for the first time a clinic in London as an outpatient,. and on my way out was accosted by someone. who asked if "they had paid my fare", with emphasis on the. word "fare". He repeated the word several times in this different context; that they should have paid my "fare", each time. emphasizing the word.

For two and a half years from the time their harassment started. until November. 1992 I refused to see a psychiatrist, because I reasoned that I was not. ill of my own action or fault, but through the stress caused by harassment, and that. a lessening of the illness would have to be consequent to a removal of its immediate cause, in other words a cessation. of harassment. I also reasoned that. since they were taunting me with jokes about mental illness, if I were. to seek treatment then the abusers would think that they had "won" and been proved "right". Remember,. the constant theme of any persecution is, "we must destroy you because. you're X", whether X is. a racial or other attribute. In this case the X was "we persecute. you because you have brain disease". The similarity of this logic to Nazi attitudes. to the mentally ill is striking.

The same. manager who'd said "it wasn't fair" asked me in winter 1992 why I didn't seek help from a. psychiatrist; was it, he asked, because "they would think they. had won" if I sought treatment? That was something I'd never said at work... again, taken separately it proves. nothing, but many such things over. a period of months proves conclusively that people in the company knew what was going on, and in quite. a lot of detail.

Usually harassment. in public lacks the level of finesse of "paying your fare". Most people's imagination does. not go beyond moronic parroting of the. current term of denigration. That is not surprising given the average level of the abusers; if they do not have. the intelligence to distinguish wrong from right then neither will they have the. capacity for anything other. than mindless repetition of a monosyllabic term calculated to fit into their. minds.

The first incidents of verbal assault. in public were in again in the summer of 1990, although they increased in frequency and venom with. time. In July

1990 the first public incident occurred on. a tube train on the Northern line. Two men and their girlfriends recognised me; the women sprang to. my defence,. saying "He looks perfectly normal, he doesn't look ill". Their boyfriends of course knew better, and followed the party line;. one of them made reference to. an "operation", apparently to work at the tube station but implicitly to a visit that I had. made to hospital a couple of weeks previously.

In August 1990 going home from college, soon after getting on. a tube train at Gloucester Road I was followed. by a group of four youths, who started a chant of abuse. That they were targeting me was confirmed by. other people in the carriage, one of whom asked the. other "who are they going on at, is it the bloke who just got on?" to which the second replied "yes,. I think so". I was tempted to reply, but as. in every other instance the abusers are enabled. in their cowardice by physically outnumbering the abused; any confrontation would result in my being beaten up, followed by. a complaint to the police that "he. attacked us", and of course he's ill, so he must have been imagining that we were getting at him. Shitty,. aren't they?

But the shittiness of the four youths on the tube train is. as nothing compared to the episode on the National Express. coach to Dover in the summer of 1992.. While going on holiday to the Continent I was verbally set upon by a couple. travelling sitting a few rows behind. The boy did the talking, his female companion contributing only a continuous. empty giggling noise. He spoke loudly to ensure other people. on the coach heard, always about "they" and "this bloke". but never naming either the abusers or the person he was talking about. He. said "they" had "found somebody from his school, and he was always really stressed. at school". They must have dug deep to find enemies there; perhaps someone who dropped. out of school, someone who didn't do too well later, who was jealous and. keen to get their own back? The boy also said "he was in. a bed and breakfast for only one night and they got him".. By a not unexpected coincidence I had been in a B&B in Oxford a week previously, which had been booked from work;. other things lead me to the conclusion that the company's. offices were bugged for most of the 2 1/2 years. that I was there, so "they" would have known a room in the. B&B had been booked. (But I'll bet "they" didn't tell the company's managers their offices were. bugged, did they?).

After a few minutes of this I went back. to where they were sitting and asked where. they were travelling. The boy named a village in France, and the. girl's giggling suddenly ceased; presumably it permeated to her brain cell what the purpose of the boy's abuse. was.

This and other set-up situations are obviously calculated to. provoke a direct confrontation. which would bring in the police, with the abusers claiming that they were the. ones attacked. Again in 1992, outside the house where I was living in Oxford I was physically. attacked by someone - not punched, just grabbed by the coat, with some verbals. thrown in for good measure. That was something the people at work. shouldn't have known about... but. soon after a couple of people were talking right in front of me about, "I heard he was attacked". The. UK police have a responsibility

for preventing assault occurring, but they do not seem. to take any interest in meeting that responsibility.. I suppose their attitude is that harassment does not come within their remit unless it involves physical assault,. and they will only become involved once that happens. That is of course. quite the wrong attitude for them to take, but. as I now understand, the police investigate only the crime they wish to investigate; if they. do not take your complaints seriously then there is nothing you can do to. make them take. action.

2983

## 14. M I-5 Persecution ' pu rpose in pu blicizing it ; cens orship in u k.* news groups

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 15:12:28 UTC
From: mefimvm@gmail.com
Message-ID: <ot0800011512275431@4ax.com>
Source record: 5801
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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## 15. M,I`5,Pe rsecution ' my respons e to th e h arassment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 15:40:10 UTC
From: vfvmfvfe@gmail.com
Message-ID: <yl0800011540093875@4ax.com>
Source record: 5802
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-= my response to the harassment. -=
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My first reaction in. 1990/91 was to assume that if I broke contact then they would not be able to follow and would lose interest. So. I did the things that have been. suggested by other people; I sold my television, stopped listening to the radio and tried to withdraw away. from the sources of abuse as much as possible.. I reasoned that they must have more important things to. deal with and that normal people would simply leave me alone if it were made difficult for them. to continue their harassment.

I reckoned without the sheer vindictiveness of. the abusers. They did not let. up but instead "got to" people around me, mainly people at work, to do their dirty work for them. I went to see my GP, who refused to believe. what he was being told, and. refused to direct me on to anyone who could be of practical assistance.. It was not until three years had passed that the GP admitted the matter was outside his competence and. suggested going to the police.

In the summer of 1994. we called in counter-surveillance experts from a private detective agency. to sweep our house and telephone for bugging devices. They conducted a thorough search and found nothing; but. as noted above, since the existence of surveillance was. being forced in my face by the harassers, you would expect them to have. taken the possibility of a counter-surveillance sweep into account. when planning the type of devices to be. employed.

In Easter 1995 I made. a complaint to my local Police station in London, but the police have. not expressed any intention to do anything about the continuing harassment ("we're not saying. it's happening and we're not saying it isn't happening" were the. words used). I think the officer I spoke to at. Easter wasn't aware of it happening, although other members of the police. force obviously do know.

From April. 1995 until the present time the matter has been discussed in a lot of detail on the Usenet (Internet) "uk.misc" newsgroup. That. discussion has given birth to the article which you. are now reading. My hopes in posting to Usenet were. that wider publicizing would discourage the security services from continuing. their harassment, and "draw people out" into concurring with the truth of what was being said. Neither. of those have followed, but the. discussion has served a purpose in allowing this structured report to be. created.

7843

## 16. M.I,5.Persecu tion - t heir metho ds an d tactics

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 16:07:56 UTC
From: ievimi@gmail.com
Message-ID: <qb0800011607557617@4ax.com>
Source record: 5803
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

-=-=-=

## 17. FA: Manuals: Collins, Halli etc +

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-01 18:42:51 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <LQvej.358224$kj1.56774@bgtnsc04-news.ops.worldnet.att.net>
Source record: 5804

Take a look at original and used manuals: COLLINS, HALLICRAFTERS,
MILITARY TM'S + other stuff too:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

73, Happy New Year, Heytubeguy

## 18. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-02 04:39:56 UTC
From: whit3rd <whit3rd@gmail.com>
Message-ID: <c1392b2b-ec5e-46f8-b751-0e77b3893656@s12g2000prg.googlegroups.com>
Source record: 5805
Cross-posted to: rec.audio.pro, sci.electronics.equipment, rec.audio.tech, rec.radio.amateur.homebrew, sci.electronics.design

```
On Dec 31 2007, 10:43 am, mad.scientist...@gmail.com wrote:
> I am looking for an inexpensive (hopefully $20 or less) analog meter
>
> ... that will read the pitch
> of the audio being played.
>

Phase-lock loops like 74HC4046 can lock onto an audio
frequency, and the follower in it has an output voltage
proportional to frequency. That's about $0.60 from your budget;
a good analog moving-needle meter will suck up the rest of it.
```

## 19. M.I 5-Per secution ` thei r m ethods and tactics

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-02 08:11:48 UTC
From: emfmf@yahoo.com
Message-ID: <sz0800020811463621@4ax.com>
Source record: 5806
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

-=-=-=

## 20. M-I 5-Persecut ion - w hy the secu rity servi ces?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-02 09:31:07 UTC
From: efiefmfmf@yahoo.com
Message-ID: <ad0800020931030073@4ax.com>
Source record: 5807
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-= why. the security services? -=
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You may ask,. why do I think the "they" referred to are the security services? Is there any evidence that there is. a single source, as opposed to a loosely based "whispering. campaign" amongst many people? Even if there is a single source, is there any evidence that "they". are professional "buggers" as opposed. to amateurs, or perhaps people working for a privately funded. organization?

a) As to the question of a single source. versus something more fragmented; it is quite obvious that there is a single source. from the way the campaign has been carried. out. Since things have been repeated verbatim which were said in my home, there. must be one group which does the watching and listening. Since. on several occasions (mainly during travel) people have been planted. in close proximity and rehearsed in what they were to say, it follows that someone. must have done the planning for that, and again a single source is. indicated.

b) So why couldn't it be amateurs? Why couldn't. it be a private organisation, for example a private detective agency paid. to manage the campaign and undertake the. technical aspects? Some detective agencies are unscrupulous as has been proved on the occasions. in the past when they've been exposed or caught; they. too can have access to the bugging technology deployed; and there are reported cases. of MI5 paying private eyes to do their dirty work (against peace campaigners and. similar enemies of the state) on the understanding that if they were caught then they could. deny all knowledge. Why. couldn't that be the case?

The main. factor pointing to direct security service involvement (as opposed to amateurs or MI5 proxies). is the breadth of their access to the media in particular, and the fact that the television companies are. so involved in the campaign. The. BBC would not directly invade someone's home themselves, since it would not be within. their remit to allocate personnel or financial resources to do so. An organisation of their stature would not. take part in a campaign set up by private sources. The. only people they would take material. from would be the security services, presumably on the assumption that if. the cat ever flew out of the bag yowling it would be MI5 who would take. the consequences.

State. sponsorship for these acts of psychological terrorism is also indicated by duration; support for over. six years for a team of three or four people would be beyond the. means and will of most private sources.

The viciousness of the slanders and personal denigration also. points to MI5; they traditionally "protect". the British state from politicians of the wrong hue by character assassination, and in this case. are using their tried and. tested methods to murder with words an enemy they have invented for. themselves.

And there are precedents.. Diana and Hewitt were alleged to have been filmed "at it" by an Army intelligence team which had. operated in Northern Ireland, these allegations were made by someone called Jones. who had been on. the team. His statements were denied by the defence establishment who tried to character-assassinate by. describing him as the "Jones twins". Funny how if. you tell the truth, then you must be ill, isn't it? Thought only communists. behaved like that?

Hewitt later said that he'd been. spoken to by someone in the army who revealed the existence of videotapes of him and. Diana, and that the tapes would be published if any. attempt was made by them to resume their association.

552

## 21. M-I,5-Persecutio n . wh y the security services ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-02 10:02:34 UTC
From: mfimfv@yahoo.com
Message-ID: <lk0800021002321702@4ax.com>
Source record: 5808
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-= why the. security services? -=
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a) As to the question. of a single source versus something more fragmented; it is quite obvious that there is a single source from the way the. campaign has been carried out.. Since things have been repeated verbatim which were said in my home, there must be one group which. does the watching and listening. Since on. several occasions (mainly during travel) people have been planted. in close proximity and rehearsed in what they were to say, it follows that someone must have done the. planning for that, and again a single. source is indicated.

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The viciousness of. the slanders and personal denigration also points to MI5; they. traditionally "protect" the British state from politicians of the wrong hue by character assassination, and in this case are using. their tried and tested methods to murder. with words an enemy they have invented for. themselves.

And there are precedents. Diana and Hewitt were alleged to have been. filmed "at it" by an. Army intelligence team which had operated in Northern Ireland, these allegations were. made by someone called Jones who had been on the team. His statements were denied by the. defence establishment who tried. to character-assassinate by describing him as the "Jones twins". Funny. how if you tell the truth, then you must be ill, isn't it? Thought only communists. behaved like that?

Hewitt later said that he'd been spoken to by someone in the. army who revealed the existence of videotapes of him and. Diana, and that the tapes would be published if any attempt was made by. them to resume their association.

552

## 22. M,I-5'Pe rsecution ' harassm ent at wo rk

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-02 10:45:12 UTC
From: imfvm@gmail.com
Message-ID: <ih0800021045097463@4ax.com>
Source record: 5809
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

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-= harassment at. work -=
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Once I stopped watching television and listening to the. radio at the end of 1990, "they" had to find other ways of. committing abuses. So they took what must. be for them a tried and tested route; they get at you by subversion of those around you. Since they wouldn't be able to do that with my. family or friends, that meant getting at people in the workplace to be. their mouthpieces. and do their dirty work for them.

They supplied my employers in Oxford with details from what was. going on in my. private life, and what I and other people had said at my home and accommodation in Oxford. So people at. work repeated verbatim words which had been said. in my home, and repeated what I'd been doing recently. Often the most trivial things, the ones from your domestic life,. are the ones which hurt most. One manager in particular at Oxford continuously. abused me for ten months with verbal sexual abuse, swearing, and. threats to terminate my. employment. After ten months I was forced to seek psychiatric help and start taking medication, and was away from work for two. months. I spoke later with a solicitor about what had happened at that company;. he advised it. was only possible to take action if you had left the company as a result of harassment, and such an action would have to. be started very soon after leaving.

Over a year later. the same manager picked on another new worker, with even more serious results;. that employee tried to commit suicide with an overdose as a result of the ill-treatment, and was forced to leave. his job. But he didn't take action against the company, either.. Abuse at work is comparable to that elsewhere in that. tangible evidence is difficult to produce, and the. abusers will always have their denials ready when challenged. And even if a court accepts what you say happened, it. still remains to prove. that abuse causes the type of breakdown I had at the end of 1992. In a recent case before a British court,. a former member of the Army brought a case against others who had. maltreated him ten years previously. Although the court accepted. that abuse had occurred, it did not agree that depressive illness necessarily followed,. and denied justice to the. plaintiff.

2973

## 23. Podcast: SolderSmoke #73 Special New Year's edition

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-02 11:29:42 UTC
From: "bill.meara@gmail.com" <bill.meara@gmail.com>
Message-ID: <2434535c-355b-420a-bad4-e5a63aeaa228@21g2000hsj.googlegroups.com>
Source record: 5810
Cross-posted to: rec.radio.amateur.homebrew, rec.radio.amateur.boatanchors, rec.radio.amateur.equipment, sci.electronics.basics, sci.astro.amateur

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connection.
BANDSWEEP: Straight Key Night at WA6ARA (40 meters).
ECHO-GUEST: Andy, ZS6ADY, South African Boatanchor
fan.
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I hope you enjoy the program. Please send us feedback.

73 from Rome
Bill M0HBR N2CQR CU2JL
http://www.gadgeteer.us

## 24. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-02 11:43:27 UTC
From: William Sommerwerck <grizzledgeezer@comcast.net>
Message-ID: <8YqdnUDVXtxU5ebanZ2dnUVZ_t-hnZ2d@comcast.com>
Source record: 5811
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

```
You can buy digital (yes, I know you said you wanted analog) autotuners --
such as those from Sabine -- for around $30.
```

## 25. Re: Mounting Toriods

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-03 14:18:14 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <ue6fj.11$dP7.10@newsfe07.lga>
Source record: 5812

"Denny" <k8do@mailblocks.com> wrote in message
news:c3370929-11db-4c80-87ac-a6166821bfc3@e25g2000prg.googlegroups.com...
>I did not see the OP as being a heat issue, just a mechanical mounting
> issue... THough toroids are more self shielding than than non toroids,
> they are not perfect... Based on my experience with toroids in VFO's
> being very close to a metal object does affect the inductance, I would
> prefer to see him glue an insulator pad to the heat sink as a spacer
> and then glue the toroid to that... IF he was in fact trying to
> heatsink the toroid, he has major design problems he needs to solve..
>
> denny / k8do

I agree. If the toroid is getting that hot. ie too hot to hold your finger
on it, then the core is under sized. A re-design is called for.

## 26. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-04 22:51:49 UTC
From: mad.scientist.jr@gmail.com
Message-ID: <373a84f8-3548-4fe4-abcb-a630cc4a4b10@j78g2000hsd.googlegroups.com>
Source record: 5814
Cross-posted to: rec.audio.pro, sci.electronics.equipment, rec.audio.tech, rec.radio.amateur.homebrew, sci.electronics.design

Thanks for your reply. I am not skilled in electronics - do you know
of any schematics I could follow to build one of these?

On Jan 1, 11:39 pm, whit3rd <whit...@gmail.com> wrote:
> On Dec 31 2007, 10:43 am, mad.scientist...@gmail.com wrote:
>
> > I am looking for an inexpensive (hopefully $20 or less) analog meter
>
> > ... that will read the pitch
> > of the audio being played.
>
> Phase-lock loops like 74HC4046 can lock onto an audio
> frequency, and the follower in it has an output voltage
> proportional to frequency. That's about $0.60 from your budget;
> a good analog moving-needle meter will suck up the rest of it.

## 27. seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-04 23:01:39 UTC
From: mad.scientist.jr@gmail.com
Message-ID: <7c0ed491-3cdb-4549-a43d-330cf4e13815@s12g2000prg.googlegroups.com>
Source record: 5815
Cross-posted to: rec.audio.pro, sci.electronics.equipment, rec.audio.tech, rec.radio.amateur.homebrew, sci.electronics.design

I would like to build an analog volume meter (moving needle type)
using moving needle gauges like this
http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
scavenged from a dead mixer's VU meter.

It would plug into the headphone jack on a set of computer speakers
and monitor the right/left sound volumes independently.

Can anyone point me to a good website or book with schematics or plans
on building this?

PS I would also be interested in building a frequency meter (also
would be plugged into computer speakers and display the pitch/
frequency of a pure sin wave coming from the computer's sound card). I
got several replies but they were pretty technical and I have not
found any complete plans for such a device. If any can suggest a good
web site or book that would be great. Thanks

>BobG:
That's a tachometer. A lo pass filter, a comparator, a oneshot, a
capacitor, and a meter on a trimpot. Every zero crossing, the
comparator fires the oneshot, the cap integrates the pulses, and the
meter shows the freq. Cal it with sine waves.... no harmonics.

linnix:
Or a $2 micro averaging the DCT, FFT or XYZ (forgot the name of that
spectral analyser).

whit3rd:
Phase-lock loops like 74HC4046 can lock onto an audio
frequency, and the follower in it has an output voltage
proportional to frequency. That's about $0.60 from your budget;
a good analog moving-needle meter will suck up the rest of it.

## 28. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-04 23:12:53 UTC
From: William Sommerwerck <grizzledgeezer@comcast.net>
Message-ID: <t7udnRRiF6zHIOPanZ2dnUVZ_qWtnZ2d@comcast.com>
Source record: 5813
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

<mad.scientist.jr@gmail.com> wrote in message
news:373a84f8-3548-4fe4-abcb-a630cc4a4b10@j78g2000hsd.googlegroups.com...

> I am not skilled in electronics -- do you know of
> any schematics I could follow to build one of these?

If you're not skilled in electronics, you're wasting your time. Buy a
commercial unit and be done with it.

## 29. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-04 23:14:46 UTC
From: William Sommerwerck <grizzledgeezer@comcast.net>
Message-ID: <NIOdncQYt8xWIOPanZ2dnUVZ_qKgnZ2d@comcast.com>
Source record: 5816
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

<mad.scientist.jr@gmail.com> wrote in message
news:7c0ed491-3cdb-4549-a43d-330cf4e13815@s12g2000prg.googlegroups.com...

> I would like to build an analog volume meter (moving needle
> type) using moving needle gauges like this
> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
> scavenged from a dead mixer's VU meter.

Why do you need this, or think you need this? It might look nice, but will
it tell you what you need to know?

## 30. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-04 23:28:52 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <WsCdnWH09fCpXOPanZ2dnUVZ_quhnZ2d@comcast.com>
Source record: 5817
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

"William Sommerwerck" <grizzledgeezer@comcast.net> wrote in message
news:t7udnRRiF6zHIOPanZ2dnUVZ_qWtnZ2d@comcast.com...
> <mad.scientist.jr@gmail.com> wrote in message
> news:373a84f8-3548-4fe4-abcb-a630cc4a4b10@j78g2000hsd.googlegroups.com...
>
>> I am not skilled in electronics -- do you know of
>> any schematics I could follow to build one of these?
>
> If you're not skilled in electronics, you're wasting your time. Buy a
> commercial unit and be done with it.
>
>

Go to a music store (one that sells musical instruments) and ask for a tuning meter. Korg is a brand many stores carry.

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

"In theory, there isn't any difference between theory and practice. In practice, there is." - Yogi Berra

## 31. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-04 23:42:05 UTC
From: Richard Crowley <rcrowley@xp7rt.net>
Message-ID: <5u7uiiF1h2rnrU1@mid.individual.net>
Source record: 5818
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

<mad.scientist.jr@gmail.com> wrote ...
>I would like to build an analog volume meter (moving needle type)
> using moving needle gauges like this
> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
> scavenged from a dead mixer's VU meter.
>
> It would plug into the headphone jack on a set of computer speakers
> and monitor the right/left sound volumes independently.
>
> Can anyone point me to a good website or book with schematics or plans
> on building this?

It is a pretty simple circuit, but it greatly depends on exactly
what your meters are. Get youself a couple of meters first,
and then come back and ask specifically for how to hook
them up. It would be very helpful to know what they came
out of, and for bonus points, the circuit diagram of where
they came from.

> PS I would also be interested in building a frequency meter (also
> would be plugged into computer speakers and display the pitch/
> frequency of a pure sin wave coming from the computer's sound card). I
> got several replies but they were pretty technical and I have not
> found any complete plans for such a device. If any can suggest a good
> web site or book that would be great. Thanks

Forget it. It is neither practical nor particularly useful.
Unless you can give us a good explanation of what you
think you want to do with it, nobody can help you.

(posted from rec.audio.tech)

## 32. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-04 23:44:24 UTC
From: Richard Crowley <rcrowley@xp7rt.net>
Message-ID: <5u7umuF1gchajU1@mid.individual.net>
Source record: 5819
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

<mad.scientist.jr@gmail.com> wrote ...
> Thanks for your reply. I am not skilled in electronics - do you know
> of any schematics I could follow to build one of these?

Maybe. What do you want to do with it?
Can't answer it as a generic question. It
seems absurd to even think about a "meter"
for frequency when listening to most any
kind of normal audio.

(posted from: rec.audio.tech)

## 33. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 00:04:27 UTC
From: kludge@panix.com
Message-ID: <flmhib$61e$1@panix2.panix.com>
Source record: 5820
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

```
William Sommerwerck <grizzledgeezer@comcast.net> wrote:
><mad.scientist.jr@gmail.com> wrote in message
>news:7c0ed491-3cdb-4549-a43d-330cf4e13815@s12g2000prg.googlegroups.com...
>
>> I would like to build an analog volume meter (moving needle
>> type) using moving needle gauges like this
>> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
>> scavenged from a dead mixer's VU meter.
>
>Why do you need this, or think you need this? It might look nice, but will
>it tell you what you need to know?

And if you really need an actual VU meter, you won't find it on too many
consoles being scavenged these days, sad to say.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."
```

## 34. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 00:39:36 UTC
From: William Sommerwerck <grizzledgeezer@comcast.net>
Message-ID: <Lb-dnWexUMAwTOPanZ2dnUVZ_gOdnZ2d@comcast.com>
Source record: 5821
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

In fairness to the original poster... Once upon a time you could buy Heath or Knight or EICO or other electronics kits, to save money, learn about electronics, or just have fun. Most currently available kits don't do much useful and are overpriced.

## 35. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 01:04:46 UTC
From: Spehro Pefhany <speffSNIP@interlogDOTyou.knowwhat>
Message-ID: <ahltn3dgpnarpd5qb0ogksdvs4vf65jhh2@4ax.com>
Source record: 5822
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 4 Jan 2008 18:28:52 -0500, the renowned "DaveM"
<masondg4499@comcast99.net> wrote:

>"William Sommerwerck" <grizzledgeezer@comcast.net> wrote in message
>news:t7udnRRiF6zHIOPanZ2dnUVZ_qWtnZ2d@comcast.com...
>> <mad.scientist.jr@gmail.com> wrote in message
>> news:373a84f8-3548-4fe4-abcb-a630cc4a4b10@j78g2000hsd.googlegroups.com...
>>
>>> I am not skilled in electronics -- do you know of
>>> any schematics I could follow to build one of these?
>>
>> If you're not skilled in electronics, you're wasting your time. Buy a
>> commercial unit and be done with it.
>>
>>
>
>Go to a music store (one that sells musical instruments) and ask for a tuning
>meter. Korg is a brand many stores carry.

Lots (mostly digital with faux analog displays) to pick from for
between $10 and $20. I just bought this one at a local music store for
$15 or so, batteries included.

http://www.amazon.com/KORG-GA30-Guitar-Bass-Tuner/dp/B000EB68VK/ref=pd_bbs_sr_8?ie=UTF8&s=
musical-instruments&qid=1199494627&sr=8-8

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

## 36. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 01:31:10 UTC
From: William Sommerwerck <grizzledgeezer@comcast.net>
Message-ID: <NMCdndkGiYZeQOPanZ2dnUVZ_ternZ2d@comcast.com>
Source record: 5823
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

"Spehro Pefhany" <speffSNIP@interlogDOTyou.knowwhat> wrote
in message news:ahltn3dgpnarpd5qb0ogksdvs4vf65jhh2@4ax.com...

> Lots (mostly digital with faux analog displays)...

Good grief. One of those rare human beings who actually understands the
difference between analog and digital. Congratulations!

## 37. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 05:09:02 UTC
From: dizzy <dizzy@nospam.invalid>
Message-ID: <sq3un3te4n9h2lgag4vkf5foroptba3sin@4ax.com>
Source record: 5824
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

mad.scientist.jr@gmail.com wrote:

>I would like to build an analog volume meter (moving needle type)
>using moving needle gauges like this
> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
>scavenged from a dead mixer's VU meter.
>
>It would plug into the headphone jack on a set of computer speakers
>and monitor the right/left sound volumes independently.
>
>Can anyone point me to a good website or book with schematics or plans
>on building this?

How about LED bar-graph VU meter? Fairly easy to make, using these:

http://www.national.com/mpf/LM/LM3915.html

or

http://www.national.com/mpf/LM/LM3916.html

Check the full datasheet for example circuits.

## 38. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 06:22:25 UTC
From: Paul Stamler <pstamlerhell@pobox.com>
Message-ID: <BmFfj.377631$kj1.4123@bgtnsc04-news.ops.worldnet.att.net>
Source record: 5825
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

<mad.scientist.jr@gmail.com> wrote in message
news:7c0ed491-3cdb-4549-a43d-330cf4e13815@s12g2000prg.googlegroups.com...
> I would like to build an analog volume meter (moving needle type)
> using moving needle gauges like this
> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
> scavenged from a dead mixer's VU meter.
>
> It would plug into the headphone jack on a set of computer speakers
> and monitor the right/left sound volumes independently.
>
> Can anyone point me to a good website or book with schematics or plans
> on building this?

I believe I published a design for a buffered VU meter somewhere around 1993 in Audio Amateur magazine, which is now known as audioXpress. It's really very simple; for an unbalanced line (like the headphone jack) all you need is an opamp (half of a TL072 works fine), a couple of resistors, and a pot to adjust the calibration. Connect the output of the opamp to the VU meter through a 3.62k resistor and you're home free (okay, you need something to power the opamp like a cheap balanced power supply or a couple of 9V batteries). If you have a real VU meter, there you are.

Of course, we don't know if your "VU" meter is a real VU meter, which has certain defined ballistics that are specified in ANSI technical standards. Can you tell us from what broken mixer you scavenged the meter?

> PS I would also be interested in building a frequency meter (also
> would be plugged into computer speakers and display the pitch/
> frequency of a pure sin wave coming from the computer's sound card). I
> got several replies but they were pretty technical and I have not
> found any complete plans for such a device. If any can suggest a good
> web site or book that would be great. Thanks

Probably the easiest way to do that is not to build it. Instead, go buy a digital voltmeter (DVM) which has a frequency scale on it.

Peace,
Paul

## 39. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 07:09:31 UTC
From: linnix <me@linnix.info-for.us>
Message-ID: <4ac74aa6-fe45-43c2-bbea-7da8e4d19b8a@n20g2000hsh.googlegroups.com>
Source record: 5826
Cross-posted to: rec.audio.pro, sci.electronics.equipment, rec.audio.tech, rec.radio.amateur.homebrew, sci.electronics.design

On Jan 4, 9:09 pm, dizzy <di...@nospam.invalid> wrote:
> mad.scientist...@gmail.com wrote:
> >I would like to build an analog volume meter (moving needle type)
> >using moving needle gauges like this
> > > http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
> >scavenged from a dead mixer's VU meter.
>
> >It would plug into the headphone jack on a set of computer speakers
> >and monitor the right/left sound volumes independently.
>
> >Can anyone point me to a good website or book with schematics or plans
> >on building this?
>
> How about LED bar-graph VU meter? Fairly easy to make, using these:

For small displays, LED is difficult to have fine resolutions.

Color backlite LCD is a much better option.

For example:

http://linnix.com/lcd-meter.jpg

is a color LCD display for one of our customer.

You can drive it with an LCD uC running a Goertzel filter on the
selected frequency. uC + LCD for $5 in volume.

## 40. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 12:51:50 UTC
From: Wim Ton <wton@bluewin.ch>
Message-ID: <477f7cfc$1_7@news.bluewin.ch>
Source record: 5827
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

mad.scientist.jr@gmail.com wrote:
> I am looking for an inexpensive (hopefully $20 or less) analog meter
>
> one with a moving needle like this
> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
>
> that I can plug my computer's sound card into (actually two meters,
> one for the right speaker, one for the left), that will read the pitch
> of the audio being played.
>
> I know that a given sound has a fundamental tone and overtones, and it
> would have to detect the fundemantal tone (like a guitar tuner). The
> audio source would be a MIDI program, so if necessary I could use
> samples of a very simple waveform (ie Sine, square, etc) if that would
> eliminate overtones and make pitch detection more accurate.
>
> Does anyone know if such a meter exists or where to find plans to
> build one?
>
> Thanks.
If you have a computer anyway, how about using the sound input and run
one of the numerous spectrum analyser programs on it?

Wim

## 41. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 13:03:28 UTC
From: William Sommerwerck <grizzledgeezer@comcast.net>
Message-ID: <JP-dnY70ZuueHeLanZ2dnUVZ_qygnZ2d@comcast.com>
Source record: 5828
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

mad.scientist.jr@gmail.com wrote:

> I know that a given sound has a fundamental tone and overtones,
> and it would have to detect the fundemantal tone (like a guitar tuner).

There's no need to "detect" the fundamental. The device would simply look for zero crossings, which are the same regardless of the presence or absence of harmonics.

In fact, I'm reasonably (but not completely) sure a PLL would work with a non-sine signal.

## 42. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 13:25:57 UTC
From: kludge@panix.com
Message-ID: <flo0h5$qjc$1@panix2.panix.com>
Source record: 5829
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

dizzy <dizzy@nospam.invalid> wrote:
>
>How about LED bar-graph VU meter? Fairly easy to make, using these:
>
>http://www.national.com/mpf/LM/LM3915.html

Comes only vaguely close to meeting VU ballistics specs, which can be
very annoying at times. Fine for rough work, though.

Vellemann makes some inexpensive LED meter kids.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

## 43. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 16:21:52 UTC
From: MooseFET <kensmith@rahul.net>
Message-ID: <f5e9cc44-76e2-4997-97a7-91bba37e74df@v46g2000hsv.googlegroups.com>
Source record: 5830
Cross-posted to: rec.audio.pro, sci.electronics.equipment, rec.audio.tech, rec.radio.amateur.homebrew, sci.electronics.design

```
On Jan 5, 5:03 am, "William Sommerwerck" <grizzledgee...@comcast.net>
wrote:
> mad.scientist...@gmail.com wrote:
> > I know that a given sound has a fundamental tone and overtones,
> > and it would have to detect the fundemantal tone (like a guitar tuner).
>
> There's no need to "detect" the fundamental. The device would simply look
> for zero crossings, which are the same regardless of the presence or absence
> of harmonics.

That need not be true. If you have a large high harmonic, you can
have two zero crossings where one is expected. Only a little
cleverness is needed to fix the problem.

> In fact, I'm reasonably (but not completely) sure a PLL would work with a
> non-sine signal.

They do but you need to make sure that they sweep up to the frequency
they are going to lock onto. Most PLL designs will happily lock onto
a harmonic.
```

## 44. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 18:53:49 UTC
From: Rich Grise <rich@example.net>
Message-ID: <1nQfj.4226$Xo1.3644@trnddc06>
Source record: 5831
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 04 Jan 2008 17:31:10 -0800, William Sommerwerck wrote:

> "Spehro Pefhany" <speffSNIP@interlogDOTyou.knowwhat> wrote in message
> news:ahltn3dgpnarpd5qb0ogksdvs4vf65jhh2@4ax.com...
>
>> Lots (mostly digital with faux analog displays)...
>
> Good grief. One of those rare human beings who actually understands the
> difference between analog and digital. Congratulations!

There are 10 kinds of people in the world:

Those who understand binary, and those who don't.

;-)
Rich

## 45. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 22:23:37 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <3MGdncfORqD0nh3anZ2dnUVZ_tCrnZ2d@comcast.com>
Source record: 5832
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

"Scott Dorsey" <kludge@panix.com> wrote in message
news:flo0h5$qjc$1@panix2.panix.com...
> dizzy <dizzy@nospam.invalid> wrote:
>>
>>How about LED bar-graph VU meter? Fairly easy to make, using these:
>>
>>http://www.national.com/mpf/LM/LM3915.html
>
> Comes only vaguely close to meeting VU ballistics specs, which can be
> very annoying at times. Fine for rough work, though.
>
> Vellemann makes some inexpensive LED meter kids.
> --scott
> --
> "C'est un Nagra. C'est suisse, et tres, tres precis."

If the OP is determined to build something to use his analog meters, I suggest the project at http://sound.westhost.com/project55.htm. Seems to be a reasonable circuit and gives a decent description as well.

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

"In theory, there isn't any difference between theory and practice. In practice, there is." - Yogi Berra

## 46. Re: potting - hot melt gule and two part epoxy

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 23:07:36 UTC
From: robert casey <wa2ise@ix.netcom.com>
Message-ID: <13o03dskpfiua8b@corp.supernews.com>
Source record: 5833

Pete KE9OA wrote:

> TenTec used hot melt glue in the VCO modules of the Paragon transceiver, so
> this glue probably has good RF characteristics (hopefully).

A way to test hot melt glue would be to place a small piece on a paper
plate in the microwave oven, along with a cup of coffee to the side (as
a dummy load to keep the oven happy). See if it gets warm.
>>
>>Has anyone attempted to use good old fashioned hot melt glue as an
>>encapsulant for modules ?
>>
>>Probably needs melting in a pot over a flame (with appropriate care).
>>
A double boiler set up may be better for that.

>>
>>Both of these options seem significantly less expensive than standard
>>epoxy potting compound...

I suppose an advantage of hot melt glue is that you could de-encapsulate
stuff easier if you ever needed to.

## 47. Re: potting - hot melt gule and two part epoxy

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 23:13:20 UTC
From: robert casey <wa2ise@ix.netcom.com>
Message-ID: <13o03ok5bsjsc98@corp.supernews.com>
Source record: 5834

> Some "pro" potting compounds are 2-part RTV rubber. This presumably has
> a bit more "give" than a rigid epoxy & is less likely to rip parts off a
> board.

Kenwood used something like that in the TS440SAT transceiver, on the VCO
if I recall correctly. Seems the stuff would sometimes corrode some of
the circuitry after several years.

## 48. Re: FCC and CE EMC Certification

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 23:20:01 UTC
From: robert casey <wa2ise@ix.netcom.com>
Message-ID: <13o0455obpqk3e3@corp.supernews.com>
Source record: 5835

> Why are some imported (to the U.S.) intentional radiators (such as
> RC toys, fitness heart-rate monitors, etc.) not FCC EMC Part 15
> certified (there is no FCC OET record on file)? These have CE
> EMC Certification and a CE 'number'; is there a treaty that
> exempts such devices from further FCC certification? Is there
> a publicly accessible database of CE 'numbers' similar to the
> FCC OET filings? I have found nothing of use on the 'net in
> these matters?
>

Probably because of a similar reason that toys have lead. Customs
agents too busy looking for drugs and such to worry about some paperwork
issue... And years ago I heard an FCC guy say that they frequently see
bogus FCC certification file numbers on stuff.

## 49. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-05 23:50:59 UTC
From: Mike Rivers <mrivers@d-and-d.com>
Message-ID: <b9a9b0ea-93ed-4b32-941b-8e57e0d9a4dd@e10g2000prf.googlegroups.com>
Source record: 5836
Cross-posted to: rec.audio.pro, sci.electronics.equipment, rec.audio.tech, rec.radio.amateur.homebrew, sci.electronics.design

On Jan 5, 5:23 pm, "DaveM" <masondg4...@comcast99.net> wrote:

> If the OP is determined to build something to use his analog meters, I suggest
> the project athttp://sound.westhost.com/project55.htm. Seems to be a
> reasonable circuit and gives a decent description as well.

My humble apologies. I thought I was reading the same question that he
asked a few days ago when he wanted to use an analog VU meter to
display pitch. I see that here he's looking to display level.
Different question, different answer, and this one has an easier
answer.

## 50. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-06 13:03:58 UTC
From: jack <jdwalton@comcast.net>
Message-ID: <Hr-dnU4zydGoTB3anZ2dnUVZ_hCdnZ2d@comcast.com>
Source record: 5837
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

National Semi still makes a "frequency to voltage" converter chip, so does Analog.

But here's a link to using a PLL -- from National Semi -- Application Note 210
http://www.national.com/an/AN/AN-210.pdf

## 51. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-06 13:20:52 UTC
From: William Sommerwerck <grizzledgeezer@comcast.net>
Message-ID: <QvydnZPbtP8LSB3anZ2dnUVZ_rSrnZ2d@comcast.com>
Source record: 5838
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

"jack" <jdwalton@comcast.net> wrote in message
news:Hr-dnU4zydGoTB3anZ2dnUVZ_hCdnZ2d@comcast.com...

> National Semi still makes a "frequency to voltage" converter chip,
> so does Analog.
>
> But here's a link to using a PLL -- from National Semi --
> Application Note 210
> http://www.national.com/an/AN/AN-210.pdf

This is fine, but what about the accuracy and resolution of the analog meter used to read the output?

It still isn't clear why the OP is insisting on an analog display.

## 52. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-06 14:32:33 UTC
From: Richard Crowley <rcrowley@xp7rt.net>
Message-ID: <13o1pk2fir5rdc3@corp.supernews.com>
Source record: 5839
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

```
"jack" wrote ...
> National Semi still makes a "frequency to voltage" converter
> chip, so does Analog.
>
> But here's a link to using a PLL -- from National Semi --
> Application Note 210
> http://www.national.com/an/AN/AN-210.pdf

Note that publication is 29 years old and I don't think any
of the mentioned ICs are still in production any more.
```

## 53. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-06 17:36:12 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13o2426q69gmc4c@corp.supernews.com>
Source record: 5840
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

Richard Crowley wrote:

> "jack" wrote ...
>
>> National Semi still makes a "frequency to voltage" converter chip, so
>> does Analog.
>>
>> But here's a link to using a PLL -- from National Semi -- Application
>> Note 210
>> http://www.national.com/an/AN/AN-210.pdf
>
>
> Note that publication is 29 years old and I don't think any
> of the mentioned ICs are still in production any more.

Since when has that stopped real homebrewers? Ahh, I see a slew of cross-posted groups (reading from r.r.a.h)

Michael

## 54. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-06 19:10:22 UTC
From: Richard Crowley <rcrowley@xp7rt.net>
Message-ID: <13o29t04c2f4k7e@corp.supernews.com>
Source record: 5841
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

"msg" wrote ...
> Richard Crowley wrote:
>> "jack" wrote ...
>>
>>> National Semi still makes a "frequency to voltage" converter chip,
>>> so does Analog.
>>>
>>> But here's a link to using a PLL -- from National Semi --
>>> Application Note 210
>>> http://www.national.com/an/AN/AN-210.pdf
>>
>>
>> Note that publication is 29 years old and I don't think any
>> of the mentioned ICs are still in production any more.
>
> Since when has that stopped real homebrewers? Ahh, I see a slew of
> cross-
> posted groups (reading from r.r.a.h)

Don't get me wrong. I am working on a couple of projects
that could use circuits like that, but they are simply not
produciton-worthy anymore. :-(

## 55. Re: FCC and CE EMC Certification

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-07 00:14:31 UTC
From: Jim <kill-spam@no-spam.org>
Message-ID: <1fOdnXdG19918xzanZ2dnUVZ_tajnZ2d@comcast.com>
Source record: 5842

> Why are some imported (to the U.S.) intentional radiators (such as
> RC toys, fitness heart-rate monitors, etc.) not FCC EMC Part 15
> certified (there is no FCC OET record on file)? These have CE
> EMC Certification and a CE 'number'; is there a treaty that
> exempts such devices from further FCC certification? Is there
> a publicly accessible database of CE 'numbers' similar to the
> FCC OET filings? I have found nothing of use on the 'net in
> these matters?
>

If memory serves, there are a couple of "exemptions" which might be what
these units are using.

==========

If the Effective Radiated Power is below a certain power level, then no
FCC certification is required.

There is also, I think, certain frequency ranges which allow slightly
higher power but still does not need FCC certification.

Jim
N6BIU

--

16:15 Pacific Time Zone
Jan 6 2008

International Time
00:15 UTC
07.01.2008

## 56. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-07 07:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1199689500@panix.com>
Source record: 5843
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

## 57. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-07 18:13:40 UTC
From: mad.scientist.jr@gmail.com
Message-ID: <ff5ff520-21a0-494d-a7c5-abe8593fc805@i72g2000hsd.googlegroups.com>
Source record: 5844
Cross-posted to: rec.audio.pro, sci.electronics.equipment, rec.audio.tech, rec.radio.amateur.homebrew, sci.electronics.design

Thanks to everyone for your replies. I just want to do analog metering with moving needle meters. I am aware that to meter volume/frequency digitally, I can buy a mixer or tuner, or via computer with the appropriate software. The meters in question are from an old Radio Shack mixer (I'll have to find the model #, left it at home). No matter what the exact specs of the meters however, the basics of the circuit for metering volume or pitch/frequency should be the same. Thanks again.

On Jan 6, 8:20 am, "William Sommerwerck" <grizzledgee...@comcast.net> wrote:
> "jack" <jdwal...@comcast.net> wrote in message
>
> news:Hr-dnU4zydGoTB3anZ2dnUVZ_hCdnZ2d@comcast.com...
>
> > National Semi still makes a "frequency to voltage" converter chip,
> > so does Analog.
>
> > But here's a link to using a PLL -- from National Semi --
> > Application Note 210
> >http://www.national.com/an/AN/AN-210.pdf
>
> This is fine, but what about the accuracy and resolution of the analog meter
> used to read the output?
>
> It still isn't clear why the OP is insisting on an analog display.

## 58. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-07 20:40:54 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-3EF1C0.15405407012008@nntp.aioe.org>
Source record: 5845
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

In article
<ff5ff520-21a0-494d-a7c5-abe8593fc805@i72g2000hsd.googlegroups.com>,
mad.scientist.jr@gmail.com wrote:

> I just want to do analog metering
> with moving needle meters.

MS-

I once had an automotive tachometer that hooked between the engine's points and ground, and was calibrated in RPM. I do not recall, but there may have been separate scales for 6 and 8 cylinders.

I don't think it had any active components, and didn't require an external power supply. It was measuring frequency by clipping, differentiating the waveform and reading the integral of the pulse on a sensitive meter movement. It was calibrated from a 60 Hz sine wave.

You may find something similar (or one with active circuits) if you search for analog tachometer circuit on the web. If you have an old automotive tachometer, just trace out its circuit.

Using it for higher audio frequencies should be a matter of calibration.

Fred

## 59. Re: FCC and CE EMC Certification

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-07 20:50:48 UTC
From: Sven Lundbech <oz7s@hotmail.com>
Message-ID: <478290a6$0$15877$edfadb0f@dtext01.news.tele.dk>
Source record: 5846

"msg" <msg@_cybertheque.org_> skrev i en meddelelse
news:13milhpul74je3@corp.supernews.com...
> Greetings:
>
> Why are some imported (to the U.S.) intentional radiators (such as
> RC toys, fitness heart-rate monitors, etc.) not FCC EMC Part 15
> certified (there is no FCC OET record on file)? These have CE
> EMC Certification and a CE 'number'; is there a treaty that
> exempts such devices from further FCC certification? Is there
> a publicly accessible database of CE 'numbers' similar to the
> FCC OET filings? I have found nothing of use on the 'net in
> these matters?
>

As far that I remember, there exist some mutual agreements concerning
putting on the market CE-marked equipment in the US and vice versa.

> This is OT to r.r.a.h. in that it is often useful to get the
> schematic of an intentional radiator from the FCC filings or
> at least find freq. and emissions info about it when using
> parts from such a device in a homebrew project. I would like to
> do the same with CE certified devices and also learn why so
> much foreign-made stuff isn't in the FCC database.

There are no central database for CE marked equipment. The doc rests at the
manufacturer and/or the entity putting the equipment on the market.

>
> Regards,
>
> Michael

Regards
Sven

## 60. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-07 23:45:22 UTC
From: Mike Rivers <mrivers@d-and-d.com>
Message-ID: <0e524943-0d06-4082-a89b-9d559f27e8bb@i12g2000prf.googlegroups.com>
Source record: 5847

On Jan 7, 3:40 pm, Fred McKenzie <fm...@aol.com> wrote:

> I once had an automotive tachometer that hooked between the engine's
> points and ground, and was calibrated in RPM. I do not recall, but
> there may have been separate scales for 6 and 8 cylinders.

The Mad Scientist still hasn't told us his application. Something like
that could work if he wanted to measure a stable frequency but it
would be of no use if he wanted to play music into it and have it
dance to the notes. '

There is no point to this discussion. If he doesn't want a frequency
meter for a single, continuous tone, he's barking up the wrong tree.
His meter won't provide a useful display no matter what.

## 61. Re: inexpensive analog audio pitch (frequency?) meter or schematic / plans for one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-08 01:46:20 UTC
From: Richard Crowley <rcrowley@xp7rt.net>
Message-ID: <5ug2vdF1hfs7tU1@mid.individual.net>
Source record: 5848

"Fred McKenzie" wrote...
> In article
> <ff5ff520-21a0-494d-a7c5-abe8593fc805@i72g2000hsd.googlegroups.com>,
> mad.scientist.jr@gmail.com wrote:
>
>> I just want to do analog metering
>> with moving needle meters.
>
> MS-
>
> I once had an automotive tachometer that hooked between the engine's
> points and ground, and was calibrated in RPM. I do not recall, but
> there may have been separate scales for 6 and 8 cylinders.
>
> I don't think it had any active components, and didn't require an
> external power supply. It was measuring frequency by clipping,
> differentiating the waveform and reading the integral of the pulse on a
> sensitive meter movement. It was calibrated from a 60 Hz sine wave.
>
> You may find something similar (or one with active circuits) if you
> search for analog tachometer circuit on the web. If you have an old
> automotive tachometer, just trace out its circuit.
>
> Using it for higher audio frequencies should be a matter of calibration.

If you differentiate the signal enough for the range of 20-20KHz,
you end up with an indication indistinguishable from "volume"! :-)
The request is fundamentally absurd.

## 62. Man-made noise: why vertical polarized?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-08 03:50:42 UTC
From: lw1ecp <danyperez1@yahoo.com.ar>
Message-ID: <7e30657f-b8cd-462b-b4ce-dd4935f503c0@u10g2000prn.googlegroups.com>
Source record: 5849

I often find the statement that noise from electrical appliances has
mainly vertical polarization. Would anybody be so kind to explain
why?. Thanks!
Daniel Perez

## 63. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-08 13:44:55 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <hKSdnR9rPOreuhnanZ2dnUVZ_qKgnZ2d@giganews.com>
Source record: 5703

Lamont wrote:
> Yep for real See video at URL:
> http://dailymotion.alice.it/video/x3wrzo_fabrication-dune-lampe-triode
>
> Nice Music Too
> Brush Up on your French
>
> From F2FO, radioamateur depuis 1959, montre ici les diff�rentes �tapes de
la
> construction d'une lampe triode r�alis�e par ses soins.
>
> Lamont

That's pretty groovy. If you Google the guy's callsign, the first hit will be his website: http://paillard.claude.free.fr/
I clicked the "Translate this page" link, and was able to read some of the plethora of text. It didn't help me with the French subtitles in the video, though!

Bryan WA7PRC

## 64. Re: Man-made noise: why vertical polarized?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-08 20:40:09 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <2d95f9de-f18a-49e5-b329-605b3fa3cf28@l1g2000hsa.googlegroups.com>
Source record: 5850

On Jan 7, 7:50 pm, lw1ecp <danyper...@yahoo.com.ar> wrote:
> I often find the statement that noise from electrical appliances has
> mainly vertical polarization. Would anybody be so kind to explain
> why?. Thanks!
> Daniel Perez

At the surface of a perfect conductor, the electric field must be perpendicular to that surface. To the extent that ground is a good conductor, the electric field will be predominantly perpendicular to the surface of the ground. That is true of signals as well as noise. If you sense the electric field within a fairly small fraction of a wavelength of good ground, expect it to be mainly vertical.

Perhaps a more interesting thing is that commonly the noise from appliances and the like in the near field has an electric field component that's much larger than the magnetic field component: that is, the ratio of the two is much higher than it is in an electromagnetic wave. In that case, you can reject such local (near-field) noise by using a receiving antenna that is not sensitive to the electric field--for example, with a balanced small loop. Since you need to be in the near field for this to give much benefit, in a practical sense you probably won't get much benefit above perhaps 5MHz. But balanced loops (which are relatively insensitive to electric fields) are useful at 160 meters, the AM medium-wave broadcast band, and VLF/LF.

Cheers,
Tom

## 65. Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-08 22:38:40 UTC
From: The Shadow <Cranston@CobaltClub.com>
Message-ID: <TXSgj.84924$KU2.56552@newsfe11.phx>
Source record: 5701

Yep for real See video at URL:
http://dailymotion.alice.it/video/x3wrzo_fabrication-dune-lampe-triode

Nice Music Too
Brush Up on your French

From F2FO, radioamateur depuis 1959, montre ici les diffï¿½rentes ï¿½tapes de la construction d'une lampe triode rï¿½alisï¿½e par ses soins.

Lamont

## 66. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-08 23:00:05 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13o7vpdi9tdl0a2@corp.supernews.com>
Source record: 5702

The Shadow wrote:

> Yep for real See video at URL:

<absurd italian url snipped>

There has been a thread on this topic in sci.electronics.repair; I
quote my last post here and refer others to the previous thread:

> N Cook wrote:
> <snip> --- why does everyone persist on quoting that absurd Italian
> URL when I posted the proper ones days ago?
>
>>
>> What was the small hinged halved chamber , he used a few times? - for
>> annealing the glass ?
>>
>> I did not follow the getter process.
>> Would someone have to be licensed to get hold of barium, caesium ?
>
>
> Here is a repost of the reference:
>
>> Thanks for the post; very inspiring. For anyone wishing to learn more,
>> the author's website is:
>> http://paillard.claude.free.fr/
>>
>> Also, you can access the video more simply here:
>> http://www.dailymotion.com/swf/x3wrzo
>>
>> (just the flash player, no baggage).
>>
>> If you wish to save the video, make sure your browser's cache has at least
>> 60MB free space; when the video has concluded playing, look for a file
>> of size 57,195,733 bytes. Copy this to 'filename.flv' and play it in
>> VLC, or any flv player.
>

## 67. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 00:16:30 UTC
From: lw1ecp <danyperez1@yahoo.com.ar>
Message-ID: <8713a620-47b9-4d03-8852-0ec15d3719fc@m34g2000hsf.googlegroups.com>
Source record: 5704

At last!. I had been looking for vacuum tubes homebrewing for ages.
Very good job. Of course, having all the needed tools does help!. Does
anybody know about vacuum pumps homebrewing??? :-)
Daniel Perez

## 68. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 03:34:46 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fm43ol$kpf$5@news.albasani.net>
Source record: 5705

lw1ecp wrote:
> At last!. I had been looking for vacuum tubes homebrewing for ages.
> Very good job. Of course, having all the needed tools does help!. Does
> anybody know about vacuum pumps homebrewing??? :-)
> Daniel Perez

A simple "column of mercury" (the metal) can pull the necessary vacuum,
you can also run pumps in series--for this application--most likely
would be cheaper to buy the supply of mercury and set up a column to
pull the vacuum for you.

Regards,
JS

## 69. Re: Beat modulation of IF by Product Detector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 04:38:13 UTC
From: Tom <holden_family@sympatico.ca>
Message-ID: <f766acd5-d6eb-4355-aad9-23af9f6da872@n20g2000hsh.googlegroups.com>
Source record: 5706

On Nov 15 2007, 11:13 pm, Tom <holden_fam...@sympatico.ca> wrote:
> 1. I've been digging around in the receiver of my Yaesu FT-817ND
> transceiver and simulating with LTspice the AGC and AM detectors to
> investigate possible distortions due to non-linear loading of the IF
> feed they share with the SSB/CW product detector when I chanced upon
> an unexpected behaviour: the envelope of a CW IF signal at the input
> of the product detector is amplitude-modulated by the beat frequency
> output. The modulation is asymmetrical and distorted and is perhaps
> only 5-10% deep but its fundamental component is clearly the beat
> frequency. I presume that the output is therefore distorted to the
> extent that the output amplitude at any time is somewhat proportional
> to the amplitude of the input envelope. Is that a reasonable
> supposition?
>
> 2. I suspect the cause is a dynamic load impedance of the product
> detector being fed by a high impedance IF source - a 100pF coupling
> capacitor (approx 3600Xc at 455kHz) preceded by an IF buffer amp with
> at least 1000R source impedance. The product detector is NJM2594,
> stated in the datasheet to have a 600R input resistance and schematics
> for test setups showing 50R sources. Is that a reasonable explanation?
> Are there any other probable causes?
>
> 3. If the hypothesis in 2 is correct, a probable solution would be to
> lower the source impedance and that of the coupling capacitor to
> something on the order of 50 Ohms. Is that a reasonable conclusion?
> Are there any other possible solutions?
>
> I've posted an article to the Files section of the FT817
Yahoo!Group:http://groups.yahoo.com/group/FT817/files/Audio%20Distortion%20-%20Re...
>
> 73, TomVE3MEO

I revised my FT-817ND so that the product detector is now fed off the
IF buffer's 220R emitter resistor (not the 1k collector) via a 0.1u
coupling capacitor. This lowers the source impedance seen by the
product detector and now I see no modulation of a CW IF input signal
by the pd's beat frequency output. I do see a trace of it on the input
from the BFO. Unfortunately, no distortion measurements on the audio
output but I believe, based on what I could simulate with LTspice,
that there is some improvement.

73, Tom VE3MEO

## 70. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 05:07:32 UTC
From: mcalhoun@ksu.edu
Message-ID: <fm496k$dc0@unix1.cc.ksu.edu>
Source record: 5707

>Does anybody know about vacuum pumps homebrewing??? :-)

A LONG time ago (maybe 40 years?), Scientific American carried an article
(in "The Amateur Scientist" pages) about making a vaccuum pump. (It may
have been part of or near an article about making your own laser which
was strong enough to bounce signals off the moon!)

--
--Myron A. Calhoun.
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
NRA Life Member & Certified Instructor for Rifle, Pistol, & Home Firearm Safety
Also Certified Instructor for the Kansas Concealed-Carry Handgun (CCH) license

## 71. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 06:25:03 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fm4dnu$prp$1@news.albasani.net>
Source record: 5708

lw1ecp wrote:
> At last!. I had been looking for vacuum tubes homebrewing for ages.
> Very good job. Of course, having all the needed tools does help!. Does
> anybody know about vacuum pumps homebrewing??? :-)
> Daniel Perez

If you wish to go the vacuum pump route, an old refrigerator unit can
pull a vacuum. I would think you would need at least two in series with
a small tank (reservoir) in between the pumps ...

JS

## 72. New Triad Transformer online archive - official!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 08:28:25 UTC
From: patrick jankowiak <eccm@swbell.net>
Message-ID: <EGkhj.6626$se5.2231@nlpi069.nbdc.sbc.com>
Source record: 5709
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.audio.tubes,rec.radio.amateur.homebrew

Hello,

Triad Transformer has generously posted their archive of transformer catalogs online spanning 60 years.

I was playing with the print feature, they will print to PDF or a 8.5x11 page OK for me.

http://www.triadtransformers.com/

Note,

if anyone has a Triad catalog or historical Triad publication not seen on the site, it would be highly appreciated, to borrow the item, and scan non-destructively, and return, all at no cost to the contributor.

Please send me an e-mail in this case and I'll connect you with the appropriate Triad person. (avoiding giving his e-mail here!!)

Thanks,

Patrick Jankowiak
Master, the Bunker of DOOM
htp://www.bunkerofdoom.com/

e-mail:
recyclerREMOVE_THIS@swbell.net

## 73. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 13:29:25 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <391a5d08-7896-4e35-9b4b-a869277b4e5c@j78g2000hsd.googlegroups.com>
Source record: 5710

The guy is a mad scientist... The video is a real hoot to watch... It
is interesting all the jigs and tools he has/made... I wonder if he
bought some of it as surplus from a commercial tube factory, maybe
circa 1920's..
I would have liked to have seen a bit more on the details of the
gettering and filament activation...

So, there ya go guys: it is only a small step from that little triode
to making your own 3CX15000A7 in the basement...

denny / k8do

## 74. How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 13:59:33 UTC
From: "John, N9JG" <john@Xremove.MeYgotwals.com>
Message-ID: <9xphj.41449$G23.11374@newsreading01.news.tds.net>
Source record: 5711
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

May not be directly antenna related, but ...
http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech

## 75. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 15:45:07 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fm5ei1$3kk$2@news.albasani.net>
Source record: 5712

Denny wrote:
> The guy is a mad scientist... The video is a real hoot to watch... It
> is interesting all the jigs and tools he has/made... I wonder if he
> bought some of it as surplus from a commercial tube factory, maybe
> circa 1920's..
> I would have liked to have seen a bit more on the details of the
> gettering and filament activation...
>
> So, there ya go guys: it is only a small step from that little triode
> to making your own 3CX15000A7 in the basement...
>
> denny / k8do

Absolutely! That damn video clip is just sheer fun to watch! I'd love
to have a friend who made 'em in their basement!

Regards,
JS

## 76. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 15:46:05 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <SsidnTlkVO--dBvanZ2dnUVZ_rWtnZ2d@giganews.com>
Source record: 5726
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

John, N9JG wrote:
> May not be directly antenna related, but ...
> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech

That's pretty groovy! If you Google the callsign F2FO and then click the
"Translate this page" link, you'll have a plethora of text available to
read.
73,
Bryan WA7PRC

## 77. Re: New Triad Transformer online archive - official!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 15:54:25 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <Q6SdnWhvSp2BdhvanZ2dnUVZ_u2mnZ2d@giganews.com>
Source record: 5727
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Patrick Jankowiak wrote:
> Hello,
>
> Triad Transformer has generously posted their archive of transformer
> catalogs online spanning 60 years.
>
> I was playing with the print feature, they will print to PDF or a 8.5x11
> page OK for me.
>
> http://www.triadtransformers.com/
>
>
> Note,
>
> if anyone has a Triad catalog or historical Triad publication not seen
> on the site, it would be highly appreciated, to borrow the item, and
> scan non-destructively, and return, all at no cost to the contributor.
>
> Please send me an e-mail in this case and I'll connect you with the
> appropriate Triad person. (avoiding giving his e-mail here!!)
>
> Thanks,
>
> Patrick Jankowiak
> Master, the Bunker of DOOM
> htp://www.bunkerofdoom.com/
>
> e-mail:
> recyclerREMOVE_THIS@swbell.net

Kudos for finding that! I would like to point out that "printing" to PDF
works only if one has a driver for that. I use PDF995 (www.pdf995.com)
which is "sponsor-ware" unless you pay a modest fee. There are others as
well (CutePDF, etc).
Bryan WA7PRC

## 78. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 15:55:47 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fm5f62$3kk$3@news.albasani.net>
Source record: 5713

John Smith wrote:
> lw1ecp wrote:
>> At last!. I had been looking for vacuum tubes homebrewing for ages.
>> Very good job. Of course, having all the needed tools does help!. Does
>> anybody know about vacuum pumps homebrewing??? :-)
>> Daniel Perez
>
> If you wish to go the vacuum pump route, an old refrigerator unit can
> pull a vacuum. I would think you would need at least two in series with
> a small tank (reservoir) in between the pumps ...
>
> JS

I was thinking, a couple of air conditioning compressors off autos would
make a heavy duty vacuum pump.

JS

## 79. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 16:04:03 UTC
From: cbx <nospam@nospam.com>
Message-ID: <gdgco31o3irj5mu0nq6megthktl44304on@4ax.com>
Source record: 5714

Anybody know where FIrefox stores the file, I searched the whole
computer for the file name, nothing. Looked in all the obvious
places,
no luck.

Jim

On Tue, 08 Jan 2008 17:00:05 -0600, msg <msg@_cybertheque.org_> wrote:

>Also, you can access the video more simply here:
>>> http://www.dailymotion.com/swf/x3wrzo
>>>

## 80. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 16:55:03 UTC
From: art <aunwin@insightbb.com>
Message-ID: <a77229ac-ee3e-49d7-b74b-49a6e985b0f0@e6g2000prf.googlegroups.com>
Source record: 5715
Cross-posted to: rec.radio.amateur.antenna, rec.radio.amateur.homebrew

On 10 Jan, 05:59, "John, N9JG" <j...@Xremove.MeYgotwals.com> wrote:
> May not be directly antenna related, but
...http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode...

What a craftsman!
Art

## 81. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 17:07:02 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13ocjrd2897fs8b@corp.supernews.com>
Source record: 5716

cbx wrote:

> Anybody know where FIrefox stores the file, I searched the whole
> computer for the file name, nothing. Looked in all the obvious
> places,
> no luck.
>

Please reference my previous post on this topic; clear your cache
before viewing the video (and be sure to use the url that I posted,
not that crazy Italian url), and then look for a file of the
exact size I stated in the post. Be sure to specify at least
60MB for your cache, or the file won't be there.

Regards,

Michael

## 82. Re: New Triad Transformer online archive - official!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 20:50:25 UTC
From: Engineer <junk2007@rogers.com>
Message-ID: <a6510ac5-df90-43fa-801f-28ebcfedf85c@x69g2000hsx.googlegroups.com>
Source record: 5717
Cross-posted to: rec.antiques.radio+phono, rec.radio.amateur.boatanchors, rec.audio.tubes, rec.radio.amateur.homebrew

On Jan 10, 3:28 am, patrick jankowiak <e...@swbell.net> wrote:
> Hello,
>
> Triad Transformer has generously posted their archive of transformer
> catalogs online spanning 60 years.
>
> I was playing with the print feature, they will print to PDF or a 8.5x11
> page OK for me.
>
> http://www.triadtransformers.com/
>
> Note,
>
> if anyone has a Triad catalog or historical Triad publication not seen
> on the site, it would be highly appreciated, to borrow the item, and
> scan non-destructively, and return, all at no cost to the contributor.
>
> Please send me an e-mail in this case and I'll connect you with the
> appropriate Triad person. (avoiding giving his e-mail here!!)
>
> Thanks,
>
> Patrick Jankowiak
> Master, the Bunker of DOOM
> htp://www.bunkerofdoom.com/
>
> e-mail:
> recyclerREMOVE_T...@swbell.net

This is a different presentation from the Hammond .pdf transformer
catalogue on which you can browse page by page for specifications - or
is it just my finger trouble on the Triad website?! I could not find
the listed pages to get specs or even types. Is this fully
downloadable as a .pdf?
Cheers,
Roger

## 83. WTB: R-14 Headphones

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 21:40:19 UTC
From: KC0EH <cvest@cox.net>
Message-ID: <6gwhj.17612$3b7.10635@newsfe23.lga>
Source record: 5718
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

A friend of mine ( W0ILJ ) , lost everything he owned , except the
clothes on his back and his car , in July 2007 , due to a flood and chemical
spill DR # 1711 , in Coffeyville , KS. No insurance , since he was in a 500
year flood plain.
He is wanting to replace a few key items and the top of his list is a set
of R-14 phones.
Please state condition , price and method of payment .
THANKS ,
73 ,
Charlie (W5COV )

## 84. Re: WTB: R-14 Headphones

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 23:06:26 UTC
From: K3HVG <jeepp@comcast.net>
Message-ID: <_fmdnUVBfbNtORvanZ2dnUVZ_vbinZ2d@comcast.com>
Source record: 5719
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

KC0EH wrote:
> A friend of mine ( W0ILJ ) , lost everything he owned , except the
> clothes on his back and his car , in July 2007 , due to a flood and chemical
> spill DR # 1711 , in Coffeyville , KS. No insurance , since he was in a 500
> year flood plain.
> He is wanting to replace a few key items and the top of his list is a set
> of R-14 phones.
> Please state condition , price and method of payment .
> THANKS ,
> 73 ,
> Charlie (W5COV )
>
>
>
When you say R-14 phones, do you mean an HS-23 or HS-33 headset? The
R-14's (and ANB's)are just the elements for these typical headsets. The
R-14 was also used in cloth flight caps, etc. I may be able to assist.

## 85. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 23:23:16 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <zNxhj.70045$L%6.68460@bignews3.bellsouth.net>
Source record: 5720

mcalhoun@ksu.edu wrote:
>> Does anybody know about vacuum pumps homebrewing??? :-)
>
> A LONG time ago (maybe 40 years?), Scientific American carried an article
> (in "The Amateur Scientist" pages) about making a vaccuum pump. (It may
> have been part of or near an article about making your own laser which
> was strong enough to bounce signals off the moon!)
>
You can get a reprint of this book from Lindsay books
www.lindsaybks.com

## 86. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-10 23:25:13 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <pPxhj.70047$L%6.66268@bignews3.bellsouth.net>
Source record: 5721

ken scharf wrote:
> mcalhoun@ksu.edu wrote:
>>> Does anybody know about vacuum pumps homebrewing??? :-)
>>
>> A LONG time ago (maybe 40 years?), Scientific American carried an article
>> (in "The Amateur Scientist" pages) about making a vaccuum pump. (It may
>> have been part of or near an article about making your own laser which
>> was strong enough to bounce signals off the moon!)
>>
> You can get a reprint of this book from Lindsay books
> www.lindsaybks.com
http://www.lindsaybks.com/bks/expphy/index.html

## 87. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-11 00:37:52 UTC
From: dplatt@radagast.org
Message-ID: <0cqi55-m2r.ln1@radagast.org>
Source record: 5722

In article <zNxhj.70045$L%6.68460@bignews3.bellsouth.net>,
ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote:

>>> Does anybody know about vacuum pumps homebrewing??? :-)
>>
>> A LONG time ago (maybe 40 years?), Scientific American carried an article
>> (in "The Amateur Scientist" pages) about making a vaccuum pump. (It may
>> have been part of or near an article about making your own laser which
>> was strong enough to bounce signals off the moon!)

>You can get a reprint of this book from Lindsay books
>www.lindsaybks.com

Or, go to www.surplusshed.com and do a search on "CD". They have
copies of Scientific American's "The Amateur Scientist on CD-ROM"
collection in the Miscellaneous category (item M2071).

"From the archives of Scientific American Magazine, more than 72 years
of experiments and projects from all The Amateur Astronomer, The
Amateur Telescope Maker, and The Amateur Scientist columns from the
beginning in 1928 thru 2001. Every article is complete with all
photos, sketches, etc. More than 1,000 projects in every major field
of science.

"This comprehensive package also includes over 2,000 pages of helpful
Technical Notes that never appeared in the magazine covering topics
from choosing binoculars for astronomy to monitoring earthquakes, as
well as the full text of Procedures in Experimental Physics by John
Strong, a classic and much sought after reference on instrument making."

List price $40, being closed out for $24. I bought one a few years
ago shortly after it came it... it's an impressive collection of
experiments and ideas. Some of them are >>censored<< dangerous,
others as safe as milk.

SA's decision to shut down the Amateur Scientist column was a
disappointing one, I think.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

## 88. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-11 00:42:55 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fm6e2c$v6a$2@news.albasani.net>
Source record: 5723

Dave Platt wrote:

> ...
> List price $40, being closed out for $24. I bought one a few years
> ago shortly after it came it... it's an impressive collection of
> experiments and ideas. Some of them are >>censored<< dangerous,
> others as safe as milk.
>
> SA's decision to shut down the Amateur Scientist column was a
> disappointing one, I think.
>

If you drive along any levee road in my area, you can remove any number of units from dumped refrigs' you like, just carry a crescent wrench or two in your back pocket.

Best thing? Cost $0.00.

Immediate satisfaction too ...

Regards,
JS

## 89. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-11 02:21:10 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfodkkl.1o2s.bit-bucket@shell.config.com>
Source record: 5724

```
On Thu, 10 Jan 2008 10:04:03 -0600, cbx wrote:
> Anybody know where FIrefox stores the file, I searched the whole
> computer for the file name, nothing. Looked in all the obvious
> places,
> no luck.

$ locate Cache | grep mozilla

Mind the CaPiTAlIZatIoN there.

Also, insure you have your browser set to actually _use_ cache and
that you have your cache size set Mucho Grande! The video is 57+ MB.

$ ls -ol *.flv
-rw-rw-r-- 1 jonesy 57195626 Jan 3 20:18 HomeMadeVacuumTubes.flv

(You'll want to rename it to something human-understandable getting it
out of cache.)

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>
```

## 90. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-11 02:36:32 UTC
From: numeric <numeric@att.net>
Message-ID: <QCAhj.409941$kj1.228642@bgtnsc04-news.ops.worldnet.att.net>
Source record: 5725
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
news:9xphj.41449$G23.11374@newsreading01.news.tds.net...
> May not be directly antenna related, but ...
> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech
>
>

See, anything is possible with a Swiss Army Knife ;-)

## 91. RCA Receiving tube manual RC-30 download link

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-11 04:07:44 UTC
From: Toadd6@gmail.com
Message-ID: <c885ae81-2a9f-46ba-83bf-2df0d6147a3c@z17g2000hsg.googlegroups.com>
Source record: 5728

http://rapidshare.com/files/75244077/RC30.pdf.html

## 92. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-11 05:46:29 UTC
From: Bob <bobsakol@hotmail.com>
Message-ID: <cf9e4$478702ab$4c0a8c1d$20546@TEKSAVVY.COM-Free>
Source record: 5729
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Magnifique!

"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
news:9xphj.41449$G23.11374@newsreading01.news.tds.net...
> May not be directly antenna related, but ...
> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech
>

## 93. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-11 07:27:45 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <UkgdL4FxpxhHFAvP@ifwtech.co.uk>
Source record: 5730
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

numeric wrote:
>
>"John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
>news:9xphj.41449$G23.11374@newsreading01.news.tds.net...
>> May not be directly antenna related, but ...
>> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech
>>
>>
>
>See, anything is possible with a Swiss Army Knife ;-)
>

Does anyone else make thumb-operated scissors? The straight handle makes
them much easier to control than the normal type.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

## 94. Re: New Triad Transformer online archive - official!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-12 06:44:27 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.01.12.06.44.27.244630@localhost.localdomain>
Source record: 5731
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Thu, 10 Jan 2008 07:54:25 -0800, Bryan wrote:

<snip>

> I would like to point out that "printing" to PDF
> works only if one has a driver for that. I use PDF995 (www.pdf995.com)
> which is "sponsor-ware" unless you pay a modest fee. There are others as
> well (CutePDF, etc).
> Bryan WA7PRC

OpenOffice.org

Open Office has supported exporting to .pdf for years and is free
open-source software.

Cheers,

--
Gregg

## 95. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-12 14:23:27 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <r34ij.69754$K27.36865@bignews6.bellsouth.net>
Source record: 5732

John Smith wrote:
> John Smith wrote:
>> lw1ecp wrote:
>>> At last!. I had been looking for vacuum tubes homebrewing for ages.
>>> Very good job. Of course, having all the needed tools does help!. Does
>>> anybody know about vacuum pumps homebrewing??? :-)
>>> Daniel Perez
>>
>> If you wish to go the vacuum pump route, an old refrigerator unit can
>> pull a vacuum. I would think you would need at least two in series
>> with a small tank (reservoir) in between the pumps ...
>>
>> JS
>
> I was thinking, a couple of air conditioning compressors off autos would
> make a heavy duty vacuum pump.
>
> JS
At one time I was thinking of finding a vacuum pump and bell jar to make
a chamber for the vacuum depositing of aluminum on glass for making
telescope mirrors. You need a two stage pump because a GOOD vacuum is
required to make a hard coating on the glass. Such chambers usually
first clean the glass with an ion bombardment using an electron gun
assembly or high voltage discharge.

## 96. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-12 18:17:57 UTC
From: Jimmie <Geefender@carolina.rr.com>
Message-ID: <47890454$0$5154$4c368faf@roadrunner.com>
Source record: 5733
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

numeric wrote:
> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
> news:9xphj.41449$G23.11374@newsreading01.news.tds.net...
>> May not be directly antenna related, but ...
>> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech
>>
>>
>
> See, anything is possible with a Swiss Army Knife ;-)
>
>
And a spot welder.

## 97. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-12 18:24:41 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <JB7ij.7882$W73.2315@trnddc04>
Source record: 5734
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Jimmie" <Geefender@carolina.rr.com> wrote in message
news:47890454$0$5154$4c368faf@roadrunner.com...
> numeric wrote:
>> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
>> news:9xphj.41449$G23.11374@newsreading01.news.tds.net...
>>> May not be directly antenna related, but ...
>>> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech
>>>
>>>
>>
>> See, anything is possible with a Swiss Army Knife ;-)
>>
>>
> And a spot welder.

And plenty of time on your hands.

## 98. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-12 22:34:16 UTC
From: clifto <clifto@gmail.com>
Message-ID: <8srn55-g6i.ln1@remote.clifto.com>
Source record: 5735
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

```
Jimmie wrote:
> numeric wrote:
>> "John, N9JG" <john@Xremove.MeYgotwals.com> wrote in message
>> news:9xphj.41449$G23.11374@newsreading01.news.tds.net...
>>> May not be directly antenna related, but ...
>>> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech
>>
>> See, anything is possible with a Swiss Army Knife ;-)
>>
> And a spot welder.

And duct tape. Or duck tape. Or Duck (TM) Tape.

--
If John McCain gets the 2008 Republican Presidential nomination,
my vote for President will be a write-in for Jiang Zemin.
```

## 99. Re: New Triad Transformer online archive - official!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 01:37:48 UTC
From: Richard Knoppow <dickburk@ix.netcom.com>
Message-ID: <13oiqrltgfiph67@corp.supernews.com>
Source record: 5736
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"geek" <geek@localhost.localdomain> wrote in message
news:pan.2008.01.12.06.44.27.244630@localhost.localdomain...
> On Thu, 10 Jan 2008 07:54:25 -0800, Bryan wrote:
>
> <snip>
>
>> I would like to point out that "printing" to PDF
>> works only if one has a driver for that. I use PDF995
>> (www.pdf995.com)
>> which is "sponsor-ware" unless you pay a modest fee.
>> There are others as
>> well (CutePDF, etc).
>> Bryan WA7PRC
>
> OpenOffice.org
>
> Open Office has supported exporting to .pdf for years and
> is free
> open-source software.
>
> Cheers,
> __
> Gregg

There are several freeware programs which create PDFs.
The one I use is called PDF Creator and installs as a
printer. Anything you can print can be made into a PDF. Its
a small program and seems to work very well.

www.pdfforge.org/products/pdfcreator

or www.pdfforge.org/

--
---
Richard Knoppow
Los Angeles, CA, USA
dickburk@ix.netcom.com

## 100. Re: RCA Receiving tube manual RC-30 download link

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 13:09:06 UTC
From: lw1ecp <danyperez1@yahoo.com.ar>
Message-ID: <ded95aa1-2510-44d2-95b8-ffec5a1c93d3@m77g2000hsc.googlegroups.com>
Source record: 5737

Thanks a lot!. My paper version had been destroyed by fungus...
Very handy info, specially if you are always doing someting with
6DQ6s, 6DQ5s and the like.
Daniel Perez

## 101. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 15:17:28 UTC
From: amdx <amdx@knology.net>
Message-ID: <8e5f8$478a2aa4$45013935$20824@KNOLOGY.NET>
Source record: 5738
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

>>>
>>> See, anything is possible with a Swiss Army Knife ;-)
>>>
>> And a spot welder.
>
> And duct tape. Or duck tape. Or Duck (TM) Tape.

> If John McCain gets the 2008 Republican >Presidential nomination, my
> vote for President will be >a write-in for Jiang Zemin.

Why would you want a communist leader, don't you think the government baby
sits us enough already?
Or, are you looking for that -free- healthcare?
Inquiring minds want to know,
Mike

## 102. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 16:42:07 UTC
From: clifto <clifto@gmail.com>
Message-ID: <0krp55-pj5.ln1@remote.clifto.com>
Source record: 5739
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

amdx wrote:
>> If John McCain gets the 2008 Republican >Presidential nomination, my
>> vote for President will be >a write-in for Jiang Zemin.
>
> Why would you want a communist leader, don't you think the government baby
> sits us enough already?

I figure if the ballot choice is between two socialists, I'll vote for a REAL
socialist.

--
If John McCain gets the 2008 Republican Presidential nomination,
my vote for President will be a write-in for Jiang Zemin.

## 103. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 16:48:00 UTC
From: Nate Bargmann <n0nb.DO.NOT.SPAM@ME.networksplus.net>
Message-ID: <pan.2008.01.13.16.47.56@ME.networksplus.net>
Source record: 5740

On Thu, 10 Jan 2008 10:04:03 -0600, cbx wrote:

> Anybody know where FIrefox stores the file, I searched the whole
> computer for the file name, nothing. Looked in all the obvious places,
> no luck.

Get the Unplug add-on, then you can snag all sorts of media files.

I finally got around to watching it last night. Quite impressive. After all, DeForest et.al. developed these methods when such techniques were unknown and more primitive. What he shows is that things can be done on a small scale and don't require large factories or armies of workers. Also, techniques like those he shows need to be preserved from being lost to industrial archives.

Beyond the electrical knowledge to make a tube that works, his ability to work with glass was most impressive to me.

73, de Nate >>

--

"The optimist proclaims that we live in the best of all possible worlds, the pessimist fears this is true."

## 104. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 17:04:12 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fmdgaf$7cm$1@news.albasani.net>
Source record: 5741
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

amdx wrote:

>> ...
> Why would you want a communist leader, don't you think the government baby
> sits us enough already?
> Or, are you looking for that -free- healthcare?
> Inquiring minds want to know,
> Mike

I think 50%+ of my earnings go to gov't. I don't think "government
would be BUYING me anything"--we would be purchasing it for ourselves.

Gasoline tax, property tax, transportation tax, booze tax, tobacco tax,
federal excise--phone tax, cell phone tax, etc., etc.

Reader Digest used to do an article once a year which showed how long a
person must work just to pay his her taxes--last I seen (years ago) it
was past April headed for June; anyone read that article lately?

The government is "of the people, by the people and for the people", if
you find anything different--there are already dark forces in the
government which need removed ... while communism is certainly something
we need fear--we should first correct the current clear and present
danger ...

Regards,
JS

## 105. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 22:58:09 UTC
From: cbx <nospam@nospam.com>
Message-ID: <dl5lo3ptmsp8p8rkrd782gpg6i08coc2sm@4ax.com>
Source record: 5742

Just where would I type these things:

$ locate Cache | grep mozilla

and

$ ls -ol *.flv
>-rw-rw-r-- 1 jonesy 57195626 Jan 3 20:18 HomeMadeVacuumTubes.flv

Do you type it in some kind of SEARCH program or just where please?

I now have the file in the cache, but can't find the cache. I don't
think it's in the Mozilla directory, probably under Documents.
I cleared the cache after setting it to 100 Mb, then downloaded the
file. Still looking, will try a search on *.FLV and see if it
appears.

Jim

On 11 Jan 2008 02:21:10 GMT, Allodoxaphobia <bit-bucket@config.com>
wrote:

>On Thu, 10 Jan 2008 10:04:03 -0600, cbx wrote:
>> Anybody know where FIrefox stores the file, I searched the whole
>> computer for the file name, nothing. Looked in all the obvious
>> places,
>> no luck.
>
>$ locate Cache | grep mozilla
>
>Mind the CaPiTAlIZatIoN there.
>
>Also, insure you have your browser set to actually _use_ cache and
>that you have your cache size set Mucho Grande! The video is 57+ MB.
>
>$ ls -ol *.flv
>-rw-rw-r-- 1 jonesy 57195626 Jan 3 20:18 HomeMadeVacuumTubes.flv
>
>(You'll want to rename it to something human-understandable getting it
>out of cache.)
>
>Jonesy

## 106. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 23:38:04 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13ol7sh1avk6s82@corp.supernews.com>
Source record: 5743

cbx wrote:

> Just where would I type these things:
>
<snip>

If you are using Windows, in a cmd.exe window try:
c: (or whatever drive letter contains your moz data files)
cd \
dir /s | find "57195626"

Michael

## 107. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 23:41:39 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13ol837nv0jbc43@corp.supernews.com>
Source record: 5744

msg wrote:

Correction below:
> cbx wrote:
>
>> Just where would I type these things:
>>
> <snip>
>
> If you are using Windows, in a cmd.exe window try:
> c: (or whatever drive letter contains your moz data files)
> cd \
> dir /s | find "57195626"
I should have typed: dir /s | find "57,195,626"
>
> Michael
>
>

## 108. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-13 23:57:47 UTC
From: cbx <nospam@nospam.com>
Message-ID: <ss8lo39iest0e1h86nuj7g9uvt923nocms@4ax.com>
Source record: 5745

Where Can I get the UNPLUG add on? Is it add on for Firefox
or for the Flash Player plugin? I finally found the file, but all
attempts to "Unlock" the file shuts the SWF player down, even using
special unlocking software.

Anyway, can you spell out exactly how I get this add on and install it
in Firefox?

The file is stored in Windows in the following file/directory:

C;\Documents and Settings\Joe User\Local Settings\Temp\fla_B.tmp
where the _ is A,B,C,D,C. depending on how many times you download
the thing. Any attempts to copy are fruitless, any attempts to unlock
the file are fruitless, as the SWF pugin player just shuts down
immediately and everything disappears. Perhaps there is some software
that can copy the file even though it is locked? I have UNLOCKER
installed on my machine and as soon as I tell it to unlock the file,
it disappears as does the SWF player (flvplayer.swf comes up in
Mozilla when you click on the link).

In meantime I'll try to find this UNPLUG plugin at Mozilla.

On Sun, 13 Jan 2008 10:48:00 -0600, Nate Bargmann
<n0nb.DO.NOT.SPAM@ME.networksplus.net> wrote:

>On Thu, 10 Jan 2008 10:04:03 -0600, cbx wrote:
>
>> Anybody know where FIrefox stores the file, I searched the whole
>> computer for the file name, nothing. Looked in all the obvious places,
>> no luck.
>
>Get the Unplug add-on, then you can snag all sorts of media files.
>
>I finally got around to watching it last night. Quite impressive. After
>all, DeForest et.al. developed these methods when such techniques were
>unknown and more primitive. What he shows is that things can be done on
>a small scale and don't require large factories or armies of workers.
>Also, techniques like those he shows need to be preserved from being lost
>to industrial archives.
>
>Beyond the electrical knowledge to make a tube that works, his ability to
>work with glass was most impressive to me.
>
>73, de Nate >>

## 109. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 00:44:58 UTC
From: cbx <nospam@nospam.com>
Message-ID: <81clo3dol5cl1fkklgi7ab4d79h3o5ivr3@4ax.com>
Source record: 5747

Dear Nate;

Thanks, found the UNPLUG at Mozilla site, installed it, and it worked
just fine, now have the file on hard drive to share with friends.
Outstanding film, and thanks to you fellows for helping me find
a way to get it on the computer.

Jim

On Sun, 13 Jan 2008 10:48:00 -0600, Nate Bargmann
<n0nb.DO.NOT.SPAM@ME.networksplus.net> wrote:

>On Thu, 10 Jan 2008 10:04:03 -0600, cbx wrote:
>
>> Anybody know where FIrefox stores the file, I searched the whole
>> computer for the file name, nothing. Looked in all the obvious places,
>> no luck.
>
>Get the Unplug add-on, then you can snag all sorts of media files.
>
>I finally got around to watching it last night. Quite impressive. After
>all, DeForest et.al. developed these methods when such techniques were
>unknown and more primitive. What he shows is that things can be done on
>a small scale and don't require large factories or armies of workers.
>Also, techniques like those he shows need to be preserved from being lost
>to industrial archives.
>
>Beyond the electrical knowledge to make a tube that works, his ability to
>work with glass was most impressive to me.
>
>73, de Nate >>

## 110. Re: Homebrew Triode !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 00:48:17 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13olc0621vdal11@corp.supernews.com>
Source record: 5746

cbx wrote:

<snip>

> The file is stored in Windows in the following file/directory:
>
> C;\Documents and Settings\Joe User\Local Settings\Temp\fla_B.tmp
> where the _ is A,B,C,D,C. depending on how many times you download
> the thing. Any attempts to copy are fruitless, any attempts to unlock
> the file are fruitless, as the SWF pugin player just shuts down
> immediately and everything disappears. Perhaps there is some software
> that can copy the file even though it is locked? I have UNLOCKER
> installed on my machine and as soon as I tell it to unlock the file,
> it disappears as does the SWF player (flvplayer.swf comes up in
> Mozilla when you click on the link).

<snip>

I use NS7.2 (Mozilla Gecko engine); I don't know the filesystem layout
of Mozilla-branded browsers so anyone with details, please chime in.
In Netscape, you can specify cache locations which can permit working
with file and directory permissions independently of volatile temp.
directories such as you have mentioned above. I have not had any
file locking problems with cache files in Netscape when copying
them from a command prompt (I don't work in a GUI). One caveat which
I mentioned before is to allocate sufficient cache size to permit
storing the full flv file and to clear the directory prior to viewing
the video in order to ensure that the file is stored and persists in
the cache.

If your Windows environment somehow prevents access to the file when
it is in a cache on a local drive, try assigning your cache to a
network share which may permit grabbing it from a different machine
(for me, I use Netware shares for my browser's cache and it is easy
to grab them from a mounted nfs filesystem on a unix box or even to
undelete them with the Netware 'salvage' utility if they should vanish).

Perhaps you can use an ntfs undelete utility to recover the file from
a local drive if the above methods don't work for you.

Regards,

Michael

## 111. Re: Selecting power Fets for 500 KC transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 01:00:58 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <6vyij.39876$k27.29118@bignews2.bellsouth.net>
Source record: 5748

Michael Black wrote:
> ken scharf (wa2mzeNOSPAMBOTS@bellsouth.net) writes:
>> Uncle Peter wrote:
>>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>>> news:MPcdj.26491$k27.25098@bignews2.bellsouth.net...
>>> > Well a friend of mine once wanted to build a mobile transmitter for
>>>> 455khz AM and 10.7mhz FM so he could tell the bozo in the car ahead of him
>>>> where to go after he cut him off.....
>>> I hope you clued him in.. (re. 262 kHz...)
>>>
>>> Pete
>>>
>>>
>> I'm not too sure, but I think that today's car radios DO use 455khz.
>> I think they stopped using 262khz some years back when Detroit started
>> having the radios made in China and got rid of the RF stages.
>>
> Actually, most of them use 450KHz nowadays.
>
> The synthesizer ICs are designed for 450KHz, presumably because of
> some fact that makes it easier to design for that IF, such as it
> allows an existing common crystal or something.
>
> I can't think of any car radio I've opened up that had digital tuning
> and not a 450KHz IF.
>
> It's not so absolute in other types of radios, but it is still a common
> IF (which can be a real bother if you've got a shortwave receiver
> and thus can't improve selectivity with a good and relatively cheap
> used 455KHz mechanical filter).
>
> 262KHz IFs in car radios did pretty much disappear with the coming of ceramic
> filters. And no car radio is being made without ceramic filters. Though,
> I think I did see one car radio, it must have had analog tuning, that did
> have a 262KHz ceramic filter.
>
> Michael
>
The choice of an IF frequency makes an interesting bit of radio history.
The first BC superhets used IF's from 90khz to several hundred khz.
Eventually 135khz, 150khz, and 175khz became "standard" (I remember
seeing replacement IF cans with these frequency numbers in J W Miller's
catalog.) These sets had an RF stage so were not bothered much by
images with such a low IF. Later during the depression when radio

manufacturers had to cut costs the RF stage went away (along with the power transformers) and the IF frequency was raised to 455 (+/- a few).

Car radios needed more sensitivity and selectivity to handle fringe area reception so they retained RF stages and used a 262khz IF.

## 112. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 03:33:22 UTC
From: Mike Coslo <mcoslo@youknow.comcast.net>
Message-ID: <Xns9A24E5D2F25CFmcoslocomcastnet@216.196.97.136>
Source record: 5749
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

John Smith <assemblywizard@gmail.com> wrote in
news:fmdgaf$7cm$1@news.albasani.net:

> amdx wrote:
>
> >> ...
>> Why would you want a communist leader, don't you think the
>> government baby
>> sits us enough already?
>> Or, are you looking for that -free- healthcare?
>> Inquiring minds want to know,
>> Mike
>
> I think 50%+ of my earnings go to gov't. I don't think "government
> would be BUYING me anything"--we would be purchasing it for ourselves.
>
> Gasoline tax, property tax, transportation tax, booze tax, tobacco
> tax, federal excise--phone tax, cell phone tax, etc., etc.
>
> Reader Digest used to do an article once a year which showed how long
> a person must work just to pay his her taxes--last I seen (years ago)
> it was past April headed for June; anyone read that article lately?
>
> The government is "of the people, by the people and for the people",
> if you find anything different--there are already dark forces in the
> government which need removed ... while communism is certainly
> something we need fear--we should first correct the current clear and
> present danger ...

How on earth did this thread morph to this stuff?

## 113. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 04:55:22 UTC
From: Tom Donaly <dtdonaly@sbcglobal.net>
Message-ID: <_WBij.35822$ID6.4577@newssvr27.news.prodigy.net>
Source record: 5750
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Mike Coslo wrote:
> John Smith <assemblywizard@gmail.com> wrote in
> news:fmdgaf$7cm$1@news.albasani.net:
>
>> amdx wrote:
>>
>>>> ...
>>> Why would you want a communist leader, don't you think the
>>> government baby
>>> sits us enough already?
>>> Or, are you looking for that -free- healthcare?
>>> Inquiring minds want to know,
>>> Mike
>> I think 50%+ of my earnings go to gov't. I don't think "government
>> would be BUYING me anything"--we would be purchasing it for ourselves.
>>
>> Gasoline tax, property tax, transportation tax, booze tax, tobacco
>> tax, federal excise--phone tax, cell phone tax, etc., etc.
>>
>> Reader Digest used to do an article once a year which showed how long
>> a person must work just to pay his her taxes--last I seen (years ago)
>> it was past April headed for June; anyone read that article lately?
>>
>> The government is "of the people, by the people and for the people",
>> if you find anything different--there are already dark forces in the
>> government which need removed ... while communism is certainly
>> something we need fear--we should first correct the current clear and
>> present danger ...
>
>
> How on earth did this thread morph to this stuff?

All it takes is just one poster wearing a tinfoil hat for something
like this to get started.
73,
Tom Donaly, KA6RUH

## 114. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 05:09:14 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fmeqpr$uso$1@news.albasani.net>
Source record: 5651
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Mike Coslo wrote:

> ...
> How on earth did this thread morph to this stuff?

The fool I responded to was very confused--just happens I guess--a few words to set a lost sole back on a steady course is hardly too much to ask ...

He thought a government had legally replaced that established by the constitution and if "that government" stole your money long enough it became theirs.

Imagine! <ROFLOL>

JS

## 115. Re: New Triad Transformer online archive - official!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 15:06:03 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <1c5ecf07-163c-4d9c-b7f9-a5b63286e875@e6g2000prf.googlegroups.com>
Source record: 5652
Cross-posted to: rec.antiques.radio+phono, rec.radio.amateur.boatanchors, rec.audio.tubes, rec.radio.amateur.homebrew

On Jan 10, 3:28 am, patrick jankowiak <e...@swbell.net> wrote:
> Hello,
>
> Triad Transformer has generously posted their archive of transformer
> catalogs online spanning 60 years.
>
> I was playing with the print feature, they will print to PDF or a 8.5x11
> page OK for me.
>
> http://www.triadtransformers.com/

"Print to PDF" from a point-and-drool browser for each page isn't
really necessary - all the pages are just JPG's, just download all the
JPG's (e.g. wget) and then assemble into a PDF (e.g. any of the
freeware tools that convert JPG's into PDF pages from a command line)
if that's what you want.

## 116. tax freedom day

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 15:40:40 UTC
From: The Shadow <Cranston@CobaltClub.com>
Message-ID: <ZnLij.390$GS1.343@newsfe11.phx>
Source record: 5653
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

```
>> Reader Digest used to do an article once a year which showed how long
>> a person must work just to pay his her taxes--last I seen (years ago)
>> it was past April headed for June; anyone read that article lately?
>>
http://www.taxfoundation.org/press/show/22300.html

Lamont
```

## 117. Re: tax freedom day

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 16:11:37 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <fmg1jp$j16$1@theodyn.ncf.ca>
Source record: 5654
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"The Shadow" (Cranston@CobaltClub.com) writes:
>
>>> Reader Digest used to do an article once a year which showed how long
>>> a person must work just to pay his her taxes--last I seen (years ago)
>>> it was past April headed for June; anyone read that article lately?
>>>
> http://www.taxfoundation.org/press/show/22300.html
>
> Lamont

If you really cared about the newsgroups, bozo, you wouldn't be posting
off topic junk to them.

This is no better than when you posted about dog food to rec.radio.shortwave,
and then turned around and changed your user name so we'd think you
were someone else.

Just because idiots abuse the newsgroups is not a reason for other idiots
to follow.

You didn't need to add anything to this thread, and keep it off topic.

You certainly didn't need to change the subject header so it looks
like you are starting another thread, a completely off topic thread to boot.

YOu could also consider that some idiot cross-posted this thread in the
first place, which is always a good reason for off-topic junk to start
up, and by adding to that mess, you just continue it all. Usually, if it's
cross-posted, you shouldn't reply (since virtually no cross-posting serves
a purpose, it is indeed the mark of someone too lazy to find the appropraite
place to post).

Finally, the only way you could be dazzled by the idea of someone making
tubes at home is because you lack depth beyond your ability to post links.
YOu saw it posted somewhere else, I don't for a minute believe you found
it through hard work on your own behalf, and like other people decided
it was "too good" to not post in yet another newsgroup, just like others
before you posted to other newsgroups where you found it.

Come up with something original, like the exact date of that 1964 article
in QST (or perhaps it was CW) where there was an article about an Argentinian
who made tubes at home. Because then you'd prove this isn't a sudden and
new thing, despite the internet wrapptings, and you'd actually add something
to the discussion, beyond an ability to use search engines.

Or spend some time in a used book store, finding and then buying the books that might be relevant to the discussion, and then start making the tubes yourself.

Michael VE2BVW

## 118. Re: tax freedom day

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 17:10:40 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fmg52o$o1o$1@news.albasani.net>
Source record: 5655
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Michael Black wrote:

> [...]
> Michael VE2BVW
>

For California, you work until May 7 to pay your taxes:

http://www.taxfoundation.org/UserFiles/Image/Tax-Freedom-Day/2007/figure5large4.jpg

JS

## 119. April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 20:50:50 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <--KdnVxU1fW4VhbanZ2dnUVZ_hmtnZ2d@comcast.com>
Source record: 5656

Hi,

Does anybody have a copy of the April 1977 QST? The article I am interested
in the the one by Howard Sartori, entitled
"solid tubes, a new life for old designs".
If somebody could scan this article, I would be glad to pay them. Thanks!

Pete KE9OA

## 120. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 21:55:23 UTC
From: "i3hev, mario held" <marioheld@tiscali.it>
Message-ID: <478bda15$0$16036$5fc30a8@news.tiscali.it>
Source record: 5657

Pete KE9OA wrote:

> Hi,
>
> Does anybody have a copy of the April 1977 QST? ...

Hi, Pete, you have mail! :)

--
73 es 51 de i3hev, op. mario

Non ï¿½ Radioamatore, se non gli fuma il saldatore!
- Campagna 2006 "Il Radioamatore non ï¿½ uno che ascolta la radio"

it.hobby.radioamatori.moderato
http://digilander.libero.it/hamweb
http://digilander.libero.it/esperantovenezia

## 121. FA: MSR-2000 Logic Cards and other items

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-14 22:36:47 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <3uRij.9$2Z1.0@read1.cgocable.net>
Source record: 5658
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On final hours of auction, some MSR-2000 Logic Cards and other items.
Thank You for looking....Norm

http://search.ebay.ca/_W0QQsassZradioguy101

## 122. Re: How to make a triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 00:13:19 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fmgtr7$5oe$1@news.albasani.net>
Source record: 5659

John, N9JG wrote:
> May not be directly antenna related, but ...
> http://www.dailymotion.com/video/x3wrzo_fabrication-dune-lampe-triode_tech
>
>

A sentence or two on "getting." Be sure to check out the "main menu"
link on the top of the page also. Some pointers can be gleaned ...

http://www.teralab.co.uk/Glass_Blowing/Mg_Evaporation/Mg_Evaporation_Page1.htm

JS

## 123. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 00:34:29 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <COudnSYWppIMYhbanZ2dnUVZ_vCknZ2d@comcast.com>
Source record: 5660

Thank you Mario.....you are the best! I have always wanted to build solid state tube replacements. Now, I am on my way to converting my Collins R-388 to a solid state unit.

Pete

"i3hev, mario held" <marioheld@tiscali.it> wrote in message news:478bda15$0$16036$5fc30a8@news.tiscali.it...
> Pete KE9OA wrote:
>
>> Hi,
>>
>> Does anybody have a copy of the April 1977 QST? ...
>
> Hi, Pete, you have mail! :)
>
> --
> 73 es 51 de i3hev, op. mario
>
> Non  Radioamatore, se non gli fuma il saldatore!
> - Campagna 2006 "Il Radioamatore non  uno che ascolta la radio"
>
> it.hobby.radioamatori.moderato
> http://digilander.libero.it/hamweb
> http://digilander.libero.it/esperantovenezia

## 124. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 01:31:52 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <d2Uij.22583$m6.7751@newsfe18.lga>
Source record: 5661

Hey Pete

Send the other Pete a copy...

Tio Pedro

## 125. Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 04:39:17 UTC
From: Bert <hcm1955@gmail.com>
Message-ID: <9d1040ff-8a30-4443-8bc7-dc5991daf999@v67g2000hse.googlegroups.com>
Source record: 5662

Does anyone in the group know anything about magnetrons? I planning to do some experiments in transmitting microwaves.

I would like to use standard magnetrons from a microwave oven and believe I can beam further if operated at the same frequency and with the outputs in phase. I have no idea on how to do this. Please advise

Cheers,
Bert

## 126. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 05:14:04 UTC
From: **THE-RFI-EMI-GUY** <rhyolite@nettally.com>
Message-ID: <478C411C.6000405@nettally.com>
Source record: 5663

Try looking up "injection locking". Basically, you take a stable signal
and force it into the magnetron via a directional coupler or isolator.
The magnetron synchs with that signal. Multiple magnetrons might synch
to each other depending on the coupling between them. Maintaining proper
phase might still be an issue for the combiner method.

Bert wrote:

>Does anyone in the group know anything about magnetrons? I planning to
>do some experiments in transmitting microwaves.
>
>I would like to use standard magnetrons from a microwave oven and
>believe I can beam further if operated at the same frequency and
>with the outputs in phase. I have no idea on how to do this. Please
>advise
>
>Cheers,
>Bert
>
>
>
>

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 127. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 05:55:07 UTC
From: Jim <kill-spam@no-spam.org>
Message-ID: <14-dnXR0YdEh1xHanZ2dnUVZ_v2pnZ2d@comcast.com>
Source record: 5664

>Pete KE9OA Wrote:
>
>Does anybody have a copy of the April 1977 QST?
>The article I am interested in the the one by
>Howard Sartori, entitled
>"solid tubes, a new life for old designs".
>

Pete, the last time I did this, I had dual gate MosFET devices. These days they are harder to find, so I'd probably use two JFETs in cascade to get more or less the same effect.

I vaguelly remember the article recommends dual gate MosFETs but I will admit, it's been a long time since I read it.

Jim Pennell
N6BIU

--

21:55 Pacific Time Zone
Jan 14 2008

International Time
05:55 UTC
15.01.2008

## 128. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 07:47:18 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <kpWdnXOBtOic-BHanZ2dnUVZ_uGknZ2d@comcast.com>
Source record: 5665

They just went out. What you have coming are 6 JPEGs that are 730k each.

Pete

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:d2Uij.22583$m6.7751@newsfe18.lga...
> Hey Pete
>
> Send the other Pete a copy...
>
> Tio Pedro
>
>

## 129. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 07:50:20 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <armdnbquno4q-BHanZ2dnUVZ_sudnZ2d@comcast.com>
Source record: 5666

I will give it a whirl. I do have some of the dual gate devices on hand. I have to do a board layout for each of the modules, that will have a pin field that has the same pattern as the tube base. Out of all the receivers I have / have had, I think the
R-388 is still my favorite.

Pete

"Jim" <kill-spam@no-spam.org> wrote in message
news:14-dnXR0YdEh1xHanZ2dnUVZ_v2pnZ2d@comcast.com...
> >Pete KE9OA Wrote:
>>
>>Does anybody have a copy of the April 1977 QST?
>>The article I am interested in the the one by
>>Howard Sartori, entitled
>>"solid tubes, a new life for old designs".
>>
>
> Pete, the last time I did this, I had dual gate MosFET devices. These
> days they are harder to find, so I'd probably use two JFETs in cascade to
> get more or less the same effect.
>
> I vaguelly remember the article recommends dual gate MosFETs but I will
> admit, it's been a long time since I read it.
>
>
> Jim Pennell
> N6BIU
>
>
> --
>
> 21:55 Pacific Time Zone
> Jan 14 2008
>
> International Time
> 05:55 UTC
> 15.01.2008
>
>

## 130. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 10:18:18 UTC
From: Bert <hcm1955@gmail.com>
Message-ID: <8033605f-de21-44a9-851c-a97ea49edea7@d70g2000hsb.googlegroups.com>
Source record: 5667

Ok I will look into injection locking.

Thanks,
Bert

On Jan 15, 12:14 am, **THE-RFI-EMI-GUY** <rhyol...@nettally.com>
wrote:
> Try looking up "injection locking". Basically, you take a stable signal
> and force it into the magnetron via a directional coupler or isolator.
> The magnetron synchs with that signal. Multiple magnetrons might synch
> to each other depending on the coupling between them. Maintaining proper
> phase might still be an issue for the combiner method.
>
> Bert wrote:
> >Does anyone in the group know anything about magnetrons? I planning to
> >do some experiments in transmitting microwaves.
>
> >I would like to use standard magnetrons from a microwave oven and
> >believe I can beam further if operated at the same frequency and
> >with the outputs in phase. I have no idea on how to do this. Please
> >advise
>
> >Cheers,
> >Bert
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"©
>
> "Treason doth never prosper: what's the reason?
> For if it prosper, none dare call it treason."
>
> "Follow The Money"  ;-P

## 131. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 19:57:18 UTC
From: "i3hev, mario held" <marioheld@tiscali.it>
Message-ID: <478d0fdb$0$21198$5fc30a8@news.tiscali.it>
Source record: 5668

Hi Pete, hi all!

Pete KE9OA wrote:

> Thank you Mario.....you are the best!

well, well, now... just one among the beAsts... <:)
glad to be of service!

> I have always wanted to build solid state tube replacements.
> Now, I am on my way to converting my Collins
> R-388 to a solid state unit.

A good lot of work, I'd say - good luck! :)

Ciao!
--
73 es 51 de i3hev, op. mario

Non ï¿½ Radioamatore, se non gli fuma il saldatore!
- Campagna 2006 "Il Radioamatore non ï¿½ uno che ascolta la radio"

it.hobby.radioamatori.moderato
http://digilander.libero.it/hamweb
http://digilander.libero.it/esperantovenezia

## 132. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 20:15:19 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13oq4md3naalia0@corp.supernews.com>
Source record: 5669

i3hev, mario held wrote:

> Hi Pete, hi all!
>
> Pete KE9OA wrote:
>
>> Thank you Mario.............you are the best!
>
>
> well, well, now... just one among the beAsts... <:)
> glad to be of service!
>
>
>> I have always wanted to build solid state tube replacements. Now, I am
>> on my way to converting my Collins R-388 to a solid state unit.
>
>
> A good lot of work, I'd say - good luck! :)
>
> Ciao!

I wouldn't mind seeing that article too; in the '80s I built some common type replacements using jfets and bipolars and installed them in an HP scope which was the fastest I had at that time. I still have a real Fetron in my desk drawer.

Regards,

Michael

## 133. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 21:57:19 UTC
From: "i3hev, mario held" <marioheld@tiscali.it>
Message-ID: <478d2bfc$0$21206$5fc30a8@news.tiscali.it>
Source record: 5670

Hi Michael,

msg wrote:

> I wouldn't mind seeing that article too...

if your address (minus underscores) is a valid one, you have mail :)

> in the '80s I built some common type replacements using jfets and
> bipolars and installed them in an HP scope.....

I think that we all may want to learn the knack: in a near future this
will probably be the only way to refurbish tube equipment... :)

Regards,
--
73 es 51 de i3hev, op. mario

Non ï¿½ Radioamatore, se non gli fuma il saldatore!
- Campagna 2006 "Il Radioamatore non ï¿½ uno che ascolta la radio"

it.hobby.radioamatori.moderato
http://digilander.libero.it/hamweb
http://digilander.libero.it/esperantovenezia

## 134. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 22:00:46 UTC
From: "i3hev, mario held" <marioheld@tiscali.it>
Message-ID: <478d2cca$0$21206$5fc30a8@news.tiscali.it>
Source record: 5671

i3hev, mario held wrote:

> Hi Michael,
>
> msg wrote: ....

er, apparently, this one went to the wrong place...
it was intended to be an answer to "msg"... :/

--
73 es 51 de i3hev, op. mario

Non ï¿½ Radioamatore, se non gli fuma il saldatore!
- Campagna 2006 "Il Radioamatore non ï¿½ uno che ascolta la radio"

it.hobby.radioamatori.moderato
http://digilander.libero.it/hamweb
http://digilander.libero.it/esperantovenezia

## 135. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 22:12:33 UTC
From: Dave <db5151@hotmail.com>
Message-ID: <13oqbuu4sa7ocb9@corp.supernews.com>
Source record: 5672
Body handling: HTML body converted to readable text

"Pete KE9OA" wrote in message
news:--KdnVxU1fW4VhbanZ2dnUVZ_hmtnZ2d@comcast.com...
> Hi,
>
> Does anybody have a copy of the April 1977 QST? The article I am
> interested in the the one by Howard Sartori, entitled
> "solid tubes, a new life for old designs".
> If somebody could scan this article, I would be glad to pay them. Thanks!
>
> Pete KE9OA
>

If anyone could send this article (or these jpegs) to my Hotmail address it would be greatly appreciated. I too would like to update an old but beloved boat-anchor.

Dave
db5151@hotmail.com

## 136. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-15 23:01:54 UTC
From: **THE-RFI-EMI-GUY** <rhyolite@nettally.com>
Message-ID: <478D3B62.7030001@nettally.com>
Source record: 5673

You will probably have to add "magnetron " to your search terms.

Bert wrote:

>Ok I will look into injection locking.
>
>Thanks,
>Bert
>
>On Jan 15, 12:14 am, **THE-RFI-EMI-GUY** <rhyol...@nettally.com>
>wrote:
>
>
>>Try looking up "injection locking". Basically, you take a stable signal
>>and force it into the magnetron via a directional coupler or isolator.
>>The magnetron synchs with that signal. Multiple magnetrons might synch
>>to each other depending on the coupling between them. Maintaining proper
>>phase might still be an issue for the combiner method.
>>
>>Bert wrote:
>>
>>
>>>Does anyone in the group know anything about magnetrons? I planning to
>>>do some experiments in transmitting microwaves.
>>>
>>>
>>>I would like to use standard magnetrons from a microwave oven and
>>>believe I can beam further if operated at the same frequency and
>>>with the outputs in phase. I have no idea on how to do this. Please
>>>advise
>>>
>>>
>>>Cheers,
>>>Bert
>>>
>>>
>>--
>>Joe Leikhim K4SAT
>>"The RFI-EMI-GUY"ï¿½
>>
>>"Treason doth never prosper: what's the reason?
>>For if it prosper, none dare call it treason."
>>
>>"Follow The Money" ;-P
>>

>>
>
>
>

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 137. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-16 01:54:51 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fmjo5b$ot6$1@news.albasani.net>
Source record: 5674

Pete KE9OA wrote:
> Hi,
>
> Does anybody have a copy of the April 1977 QST? The article I am interested
> in the the one by Howard Sartori, entitled
> "solid tubes, a new life for old designs".
> If somebody could scan this article, I would be glad to pay them. Thanks!
>
> Pete KE9OA
>
>

Well, I too would be interested in viewing this article--if there is
anyone so kind:

assemblywizard@gmail.com

Regards,
JS

## 138. FA:MATCH BOX BAND SW + OTHER STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-16 03:07:34 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <Wxejj.437587$kj1.164977@bgtnsc04-news.ops.worldnet.att.net>
Source record: 5675

I have a NIB Johnson 275 Watt Match Box Band Switch + manuals and other stuff too:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

73 Heytubeguy

## 139. Re: New Triad Transformer online archive - official!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-16 03:41:42 UTC
From: Bret Ludwig <bretldwig@yahoo.com>
Message-ID: <85174d21-5033-4c8e-b647-285f90f29fe4@f3g2000hsg.googlegroups.com>
Source record: 5676
Cross-posted to: rec.antiques.radio+phono, rec.radio.amateur.boatanchors, rec.audio.tubes, rec.radio.amateur.homebrew

Interesting site but I would have preferred they be PDFed eady to go,
or else DjVu.

Still, a useful resource.

Triad made some good parts.

## 140. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-16 04:07:53 UTC
From: Erich <n6fd@mchsi.com>
Message-ID: <tqfjj.37458$Ux2.4127@attbi_s22>
Source record: 5677

One microwave oven magnetron will get you pretty close to the legal
limit. They can be injection locked together, but that usually requires
a circulator that can handle the necessary power (big $). You also need
some way of adjusting the phase between the magnetrons so that the power
will add. The adjustment can be tricky as they will tend to interact
even with the circulators.

73, Erich N6FD

Bert wrote:
> Does anyone in the group know anything about magnetrons? I planning to
> do some experiments in transmitting microwaves.
>
> I would like to use standard magnetrons from a microwave oven and
> believe I can beam further if operated at the same frequency and
> with the outputs in phase. I have no idea on how to do this. Please
> advise
>
> Cheers,
> Bert
>
>

## 141. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-16 06:36:15 UTC
From: Jim <kill-spam@no-spam.org>
Message-ID: <rvydnYKVdeF9OBDanZ2dnUVZ_vumnZ2d@comcast.com>
Source record: 5678

Dual Gate MosFets are convenient for a tube replacement....

As I recall, I rectified the old filament voltage, regulated it, and made
that the new "plate" voltage. Other than that, JFETs and, when necessary,
Dual Gate MosFETs did most of the work.

Well, had to mess with the "grid" bias resistors too.

OK, so I used an audio Amp IC for the last part of the audio chain.
Still, all in all, the conversions I did were surprisingly easy.

Jim

--

22:34 Pacific Time Zone
Jan 15 2008

International Time
06:34 UTC
16.01.2008

## 142. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-16 21:07:19 UTC
From: Bert <hcm1955@gmail.com>
Message-ID: <719247d4-dfdf-4ce3-94ba-c8c3ab04e0d2@i7g2000prf.googlegroups.com>
Source record: 5679

Show how much are circulators?. For the phase can I add an adjustable
delay?

Again Thanks,
Bert

On Jan 15, 11:07 pm, Erich <n...@mchsi.com> wrote:
> One microwave oven magnetron will get you pretty close to the legal
> limit.  They can be injection locked together, but that usually requires
> a circulator that can handle the necessary power (big $).  You also need
> some way of adjusting the phase between the magnetrons so that the power
> will add.  The adjustment can be tricky as they will tend to interact
> even with the circulators.
>
> 73, Erich N6FD
>
>
>
> Bert wrote:
> > Does anyone in the group know anything about magnetrons? I planning to
> > do some experiments in transmitting microwaves.
>
> > I would like to use standard magnetrons from a microwave oven and
> > believe I can beam further if operated at the same frequency and
> > with the outputs in phase. I have no idea on how to do this. Please
> > advise
>
> > Cheers,
> > Bert- Hide quoted text -
>
> - Show quoted text -

## 143. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 05:24:53 UTC
From: **THE-RFI-EMI-GUY** <rhyolite@nettally.com>
Message-ID: <WwBjj.54124$vt2.36256@bignews8.bellsouth.net>
Source record: 5680

Circulators are pretty pricy. You will need at least one to keep the high power energy from each magnetron from getting back into the injection source. I read somewhere that about 2% of the magnetron power is required to injection lock. As far as phase, you will need a mechanical or electrical means to adjust the phase of the legs of the injection signals as well as a means to adjust the phase of the magnetrons when combining them. Typically a peice of coax or waveguide of some fraction of a wavelength as require IE; 1/4 wave = 90 degrees. Coax has a velocity factor which makes it behave electrically longer than it is physically.

I am guessing, but perhaps with proper coupling technique, you might get the magnetrons to lock to each other coherently.

Bert wrote:

>Show how much are circulators?. For the phase can I add an adjustable
>delay?
>
>Again Thanks,
>Bert
>
>
>On Jan 15, 11:07 pm, Erich <n...@mchsi.com> wrote:
>
>
>>One microwave oven magnetron will get you pretty close to the legal
>>limit. They can be injection locked together, but that usually requires
>>a circulator that can handle the necessary power (big $). You also need
>>some way of adjusting the phase between the magnetrons so that the power
>>will add. The adjustment can be tricky as they will tend to interact
>>even with the circulators.
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>>73, Erich N6FD
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>>
>>Bert wrote:
>>
>>
>>>Does anyone in the group know anything about magnetrons? I planning to
>>>do some experiments in transmitting microwaves.
>>>
>>>
>>>I would like to use standard magnetrons from a microwave oven and

>>>believe I can beam further if operated at the same frequency and
>>>with the outputs in phase. I have no idea on how to do this. Please
>>>advise
>>>
>>>
>>>Cheers,
>>>Bert- Hide quoted text -
>>>
>>>
>>- Show quoted text -
>>
>>
>
>
>

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 144. Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 09:23:43 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <dcadnZsBbpgKgxLanZ2dnUVZ_v2pnZ2d@comcast.com>
Source record: 5681

Hi,

Is there any kind of program that makes the calculations a bit easier? If I knew how to do the calculations, I could throw the formula into a spreadsheet. What I need to do is calculate the inductance with the parameters of cross sectional area, length, position on the ferrite rod, number of turns, and permeability of the ferrite material itself.
I would like to throw these parameters into the spreadsheet/program, and let the software calculate the inductance for me.

Pete

## 145. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 11:40:44 UTC
From: Bert <hcm1955@gmail.com>
Message-ID: <2e9fdb7b-4fa7-4140-b921-debf982a5ba5@q39g2000hsf.googlegroups.com>
Source record: 5682

Hi Joe,

Thank you the info. Is it required to cross couple them, or can I use
one magnetron as a "master" that injects into 3 to 5 other "slave"
magnetrons? I will post the results of my effort. Again thanks.

Cheers,
Bert

On Jan 17, 12:24 am, **THE-RFI-EMI-GUY** <rhyol...@nettally.com>
wrote:
> Circulators are pretty pricy. You will need at least one to keep the
> high power energy from each magnetron from getting back into the
> injection source. I read somewhere that about 2% of the magnetron power
> is required to injection lock. As far as phase, you will need a
> mechanical or electrical means to adjust the phase of the legs of the
> injection signals as well as a means to adjust the phase of the
> magnetrons when combining them. Typically a peice of coax or waveguide
> of some fraction of a wavelength as require IE; 1/4 wave = 90 degrees.
> Coax has a velocity factor which makes it behave electrically longer
> than it is physically.
>
> I am guessing, but perhaps with proper coupling technique, you might get
> the magnetrons to lock to each other coherently.
>
>
>
>
>
> Bert wrote:
> >Show how much are circulators?. For the phase can I add an adjustable
> >delay?
>
> >Again Thanks,
> >Bert
>
> >On Jan 15, 11:07 pm, Erich <n...@mchsi.com> wrote:
>
> >>One microwave oven magnetron will get you pretty close to the legal
> >>limit.  They can be injection locked together, but that usually requires
> >>a circulator that can handle the necessary power (big $).  You also need
> >>some way of adjusting the phase between the magnetrons so that the power
> >>will add.  The adjustment can be tricky as they will tend to interact
> >>even with the circulators.
>

> >>73, Erich N6FD
>
> >>Bert wrote:
>
> >>>Does anyone in the group know anything about magnetrons? I planning to
> >>>do some experiments in transmitting microwaves.
>
> >>>I would like to use standard magnetrons from a microwave oven and
> >>>believe I can beam further if operated at the same frequency and
> >>>with the outputs in phase. I have no idea on how to do this. Please
> >>>advise
>
> >>>Cheers,
> >>>Bert- Hide quoted text -
>
> >>- Show quoted text -
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"©
>
> "Treason doth never prosper: what's the reason?
> For if it prosper, none dare call it treason."
>
> "Follow The Money"  ;-P- Hide quoted text -
>
> - Show quoted text -

## 146. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 13:57:07 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <bae1f5e5-f66e-4237-a891-7fa22a8326dc@t1g2000pra.googlegroups.com>
Source record: 5683

On Jan 15, 4:57 pm, "i3hev, mario held" <marioh...@tiscali.it> wrote:
> Hi Michael,
>
> msg wrote:
> > I wouldn't mind seeing that article too...
>
> if your address (minus underscores) is a valid one, you have mail :)
>
> > in the '80s I built some common type replacements using jfets and
> > bipolars and installed them in an HP scope.....
>
> I think that we all may want to learn the knack: in a near future this
> will probably be the only way to refurbish tube equipment... :)

I see huge lots of mil-surplus 6AU6's, 6CL6's, 6BA6's, 6AK5's etc.
moving through the surplus channels all the time, still.

Someday we'll run out but I suspect that transistors will be obsolete
before we use all those tubes up!

Tim.

## 147. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 14:11:21 UTC
From: Dirk Claessens <No@way.invalid>
Message-ID: <mn.8b8f7d81738e52bc.59994@way.invalid>
Source record: 5684

On 2008-01-17, Pete KE9OA (71.239.37.56) wrote in
message <dcadnZsBbpgKgxLanZ2dnUVZ_v2pnZ2d@comcast.com>

> Hi,
>
> Is there any kind of program that makes the calculations a bit easier? If I
> knew how to do the calculations, I could throw the formula into a
> spreadsheet. What I need to do is calculate the inductance with the
> parameters of cross sectional area, length, position on the ferrite rod,
> number of turns, and permeability of the ferrite material itself.
> I would like to throw these parameters into the spreadsheet/program, and let
> the software calculate the inductance for me.
>
> Pete

Have a look here, see section 2 "Practical antenna design"

<http://www.c-maxgroup.com/tech/antenna.php>

--
Dirk.
No trees were killed in the creation of this message;
however, many electrons were terribly inconvenienced.

## 148. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 17:41:08 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <UqMjj.39622$Ux2.21213@attbi_s22>
Source record: 5685

>> Is there any kind of program that makes the calculations a bit easier? If
>> I knew how to do the calculations, I could throw the formula into a
>> spreadsheet. What I need to do is calculate the inductance with the
>> parameters of cross sectional area, length, position on the ferrite rod,
>> number of turns, and permeability of the ferrite material itself.
>> I would like to throw these parameters into the spreadsheet/program, and
>> let the software calculate the inductance for me.
>>
>> Pete

GM Pete. Sorry I had to be short on the telephone call, I had a doctors appointment and was running late already. WRT your "antenna problem or opportunity". I made an antenna for WWVB, and also use it for NAA at 24 KHz by adding an additional cap across it for resonance down there. It's better heads and shoulders than any ferrite antenna I ever made. 24 inch bicycle wheel, spokes removed and a space made in the wheel continuity by sawing it apart and adding a small block of wood. This also serves to hold an old ARCO tuning cap of high value, and an instrumentation amplifier made from three LM833 op amps.

A layer of shipping plastic foam between the rim and 120 turns of HPT wire (#26 is a good number), then wrap it all up with a bit of squeezed on aluminum wrap. (Also not continuous, and grounded at the spacer.)

With the inst, amp set for 60 dB of gain, I receive WWVB at about -40 dBm into the 50 Ohm input to a HP selective Voltmeter. Best ever ferrite was around 30 dB worse than this. I use it almost continuously for NAA monitoring of SIDs, and they never go out of detection even in the basement workshop.

Regards and happy New Year.
W4ZCB

## 149. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 19:03:50 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13ov989erjuvec1@corp.supernews.com>
Source record: 5686

Pete KE9OA wrote:

> Hi,
>
> Does anybody have a copy of the April 1977 QST? The article I am interested
> in the the one by Howard Sartori, entitled
> "solid tubes, a new life for old designs".
> If somebody could scan this article, I would be glad to pay them. Thanks!
>
> Pete KE9OA
>
>

I made a pdf from i3hev's scans and will gladly email it to anyone who asks.

Regards,

Michael

## 150. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 19:05:50 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13ov9c1qm5dpd75@corp.supernews.com>
Source record: 5687

Harold E. Johnson wrote:

> I made an antenna for WWVB, and also use it for NAA at 24 KHz
> by adding an additional cap across it for resonance down there. It's better
> heads and shoulders than any ferrite antenna I ever made. 24 inch bicycle
> wheel,...

Please consider photographing this device from a number of angles,
annotating the images with construction data, and making the results
available. I am very interested.

Regards,

Michael

## 151. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 19:12:56 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13ov9pbnkj38p0a@corp.supernews.com>
Source record: 5688

msg wrote:

> Pete KE9OA wrote:
>
>> Hi,
>>
>> Does anybody have a copy of the April 1977 QST? The article I am
>> interested in the the one by Howard Sartori, entitled
>> "solid tubes, a new life for old designs".
>> If somebody could scan this article, I would be glad to pay them. Thanks!
>>
>> Pete KE9OA
>>
>
> I made a pdf from i3hev's scans and will gladly email it to anyone who
> asks.
>

I tried emailing to mario, i3hev, but it bounced (user unknown) using the
'From' and 'Return-path' addresses from his email to me. Anyway, thanks
mario for the scans.

Michael

## 152. Datailed photos of EB104-Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 21:16:53 UTC
From: Holger Doerschel <newsgroups@pt100.net>
Message-ID: <5v9uu5F1liu0cU1@mid.individual.net>
Source record: 5689

Hello,

I bought the EB104 kit from CCI. The documentation is a little bit poor (black and white, poor copy). Has anyone dedailed photos of the assembled board?

And:
Has anybody some informations of an appicable low-pass filter or an diplexer (all bands inc. warc)?

best regards

Holger / DL9HDA

## 153. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 22:11:04 UTC
From: "i3hev, mario held" <marioheld@tiscali.it>
Message-ID: <478fd235$0$26143$5fc30a8@news.tiscali.it>
Source record: 5690

msg wrote:

> I tried emailing to mario, i3hev, but it bounced... Anyway, thanks...

you're welcome :)

I'm a bit worried about the bounces, I only use valid addresses - oh,
well, mysteries of the network... :-o

Ciao!
--
73 es 51 de i3hev, op. mario

Non ï¿½ Radioamatore, se non gli fuma il saldatore!
- Campagna 2006 "Il Radioamatore non ï¿½ uno che ascolta la radio"

it.hobby.radioamatori.moderato
http://digilander.libero.it/hamweb
http://digilander.libero.it/esperantovenezia

## 154. Re: Datailed photos of EB104-Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 22:12:50 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fmojsu$38g$3@news.albasani.net>
Source record: 5691

Holger Doerschel wrote:
> Hello,
>
> I bought the EB104 kit from CCI. The documentation is a little bit poor
> (black and white, poor copy). Has anyone dedailed photos of the assembled
> board?
>
> And:
> Has anybody some informations of an appicable low-pass filter or an diplexer
> (all bands inc. warc)?
>
>
> best regards
>
> Holger / DL9HDA

Some useful info on that board here, along with a populated board image,
albeit rather poor:

http://www.qsl.net/wm5z/HF%20Amplifier.htm

Regards,
JS

## 155. Re: Datailed photos of EB104-Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 22:20:18 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fmokau$38g$4@news.albasani.net>
Source record: 5692

Holger Doerschel wrote:
> Hello,
>
> I bought the EB104 kit from CCI. The documentation is a little bit poor
> (black and white, poor copy). Has anyone dedailed photos of the assembled
> board?
>
> And:
> Has anybody some informations of an appicable low-pass filter or an diplexer
> (all bands inc. warc)?
>
>
> best regards
>
> Holger / DL9HDA

By the way, when visiting metal scrappers, I have often noticed large stacks of motorola business/gov't radio equipment. I have bought these for $0.50 USD a pound, on up ...

Great source of high output transistors/parts/heat-sinks/etc. In some instances, the amp board can be removed from equip. with the corresponding heat sink and mated up with a proper driver.

Regards,
JS

## 156. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-17 22:45:58 UTC
From: clifto <clifto@gmail.com>
Message-ID: <6e2565-mga.ln1@remote.clifto.com>
Source record: 5693

msg wrote:
> I made a pdf from i3hev's scans and will gladly email it to anyone who asks.

I'd love a copy. My e-mail address is good.

--
If John McCain gets the 2008 Republican Presidential nomination,
my vote for President will be a write-in for Jiang Zemin.

## 157. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-18 00:23:50 UTC
From: **THE-RFI-EMI-GUY** <rhyolite@nettally.com>
Message-ID: <GcSjj.74691$L%6.37730@bignews3.bellsouth.net>
Source record: 5694

Bert wrote:

>Hi Joe,
>
>Thank you the info. Is it required to cross couple them, or can I use
>one magnetron as a "master" that injects into 3 to 5 other "slave"
>magnetrons? I will post the results of my effort. Again thanks.
>
>Cheers,
>Bert
>
>On Jan 17, 12:24 am, **THE-RFI-EMI-GUY** <rhyol...@nettally.com>
>wrote:
>
>
>>Circulators are pretty pricy. You will need at least one to keep the
>>high power energy from each magnetron from getting back into the
>>injection source. I read somewhere that about 2% of the magnetron power
>>is required to injection lock. As far as phase, you will need a
>>mechanical or electrical means to adjust the phase of the legs of the
>>injection signals as well as a means to adjust the phase of the
>>magnetrons when combining them. Typically a peice of coax or waveguide
>>of some fraction of a wavelength as require IE; 1/4 wave = 90 degrees.
>>Coax has a velocity factor which makes it behave electrically longer
>>than it is physically.
>>
>>I am guessing, but perhaps with proper coupling technique, you might get
>>the magnetrons to lock to each other coherently.
>>
>>
>>
>>
>>
>>Bert wrote:
>>
>>
>>>Show how much are circulators?. For the phase can I add an adjustable
>>>delay?
>>>
>>>
>>>Again Thanks,
>>>Bert
>>>
>>>

>>>On Jan 15, 11:07 pm, Erich <n...@mchsi.com> wrote:
>>>
>>>
>>>>One microwave oven magnetron will get you pretty close to the legal
>>>>limit. They can be injection locked together, but that usually requires
>>>>a circulator that can handle the necessary power (big $). You also need
>>>>some way of adjusting the phase between the magnetrons so that the power
>>>>will add. The adjustment can be tricky as they will tend to interact
>>>>even with the circulators.
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>>>>
>>>>73, Erich N6FD
>>>>
>>>>
>>>>Bert wrote:
>>>>
>>>>
>>>>>Does anyone in the group know anything about magnetrons? I planning to
>>>>>do some experiments in transmitting microwaves.
>>>>>
>>>>>
>>>>>I would like to use standard magnetrons from a microwave oven and
>>>>>believe I can beam further if operated at the same frequency and
>>>>>with the outputs in phase. I have no idea on how to do this. Please
>>>>>advise
>>>>>
>>>>>
>>>>>Cheers,
>>>>>Bert- Hide quoted text -
>>>>>
>>>>>
>>>>- Show quoted text -
>>>>
>>>>
>>--
>>Joe Leikhim K4SAT
>>"The RFI-EMI-GUY"ï¿½
>>
>>"Treason doth never prosper: what's the reason?
>>For if it prosper, none dare call it treason."
>>
>>"Follow The Money" ;-P- Hide quoted text -
>>
>>- Show quoted text -
>>
>>
>
>
>
Its only going to be as stable as the master. There is also some

discussion about the Q of the cavity. If the Q is too high, the ability to "pull" the frequency will be restricted. I am afraid you are playing in the sandbox of experimentation. Best of luck and don't fry yourself!

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 158. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-18 05:34:37 UTC
From: Dave <db5151@hotmail.com>
Message-ID: <13p0ejh8809ik91@corp.supernews.com>
Source record: 5695

"msg" <msg@_cybertheque.org_> wrote in message
news:13ov989erjuvec1@corp.supernews.com...
> Pete KE9OA wrote:
>
>> Hi,
>>
>> Does anybody have a copy of the April 1977 QST? The article I am
>> interested in the the one by Howard Sartori, entitled
>> "solid tubes, a new life for old designs".
>> If somebody could scan this article, I would be glad to pay them. Thanks!
>>
>> Pete KE9OA
>
> I made a pdf from i3hev's scans and will gladly email it to anyone who
> asks.
>
> Regards,
>
> Michael

I would *love* a copy. My Hotmail address should work, but if it bounces
for any reason, try
d b e a n e (at) p d q (dot) n e t

That one *will* work.

Many thanks,

Dave

## 159. Re: Soldering surface mount etc, new set of videos

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-18 06:19:41 UTC
From: Bob <bob3635x@yahoo.com>
Message-ID: <06d0884f-12f7-4f0f-903b-8f4c03e1d16c@m34g2000hsb.googlegroups.com>
Source record: 5696

On Dec 5 2007, 3:34 am, bigorangebus <bigorange...@yahoo.com> wrote:
> Small devices like 0602, 0805 components

Small? 0603 and 0805 devices are HUGE. I have to
solder 0402 and 0201 parts. The best way to do this
is to use a needle to apply small dabs of slow setting
epoxy on the PCB (between the pads), and then place
the devices with tweezers. Once all the devices are
placed, let the epoxy cure for a few hours (you can
speed up the curing by using a warm oven). Then
apply the solder paste. A low power microscope
(10x to 30x) is a big help.

## 160. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-18 13:11:56 UTC
From: Meregalli <merega@tiscali.it>
Message-ID: <4790a5d3$0$16039$5fc30a8@news.tiscali.it>
Source record: 5697

msg wrote:
> Pete KE9OA wrote:
>
>> Hi,
>>
>> Does anybody have a copy of the April 1977 QST? The article I am
>> interested in the the one by Howard Sartori, entitled
>> "solid tubes, a new life for old designs".
>> If somebody could scan this article, I would be glad to pay them.
>> Thanks!
>>
>> Pete KE9OA
>>
>>
>
> I made a pdf from i3hev's scans and will gladly email it to anyone
> who
> asks.
> Regards,
>
> Michael

Would you be so kind to send me the sad pdf?
My Email is good
Luca

## 161. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 05:19:39 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <luKdnbxXy6j-FQzanZ2dnUVZ_gudnZ2d@comcast.com>
Source record: 5698

Thanks Harold.....I whill give it a whirl. For the past few days, I have been experimenting with the ferrite loopstick. Either winding works ok (LW or MW), but if the LW winding is connected, it appears to cause some self resonance problems with the MW winding in the middle of the band, unless I ground both ends of the LW winding. Right now, I am trying a multi-layer winding for the LW section to see if I can eliminate the interraction. It should work.....my Grundig Satellit 3400 appears to use this principle, unless there is a seperate pickup winding for each band. Oh, about the call.....don't worry about it. I had to go to the doctor myself today. Must keep appointments!

Pete

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message news:UqMjj.39622$Ux2.21213@attbi_s22...
>>> Is there any kind of program that makes the calculations a bit easier?
>>> If I knew how to do the calculations, I could throw the formula into a
>>> spreadsheet. What I need to do is calculate the inductance with the
>>> parameters of cross sectional area, length, position on the ferrite rod,
>>> number of turns, and permeability of the ferrite material itself.
>>> I would like to throw these parameters into the spreadsheet/program, and
>>> let the software calculate the inductance for me.
>>>
>>> Pete
>
> GM Pete. Sorry I had to be short on the telephone call, I had a doctors
> appointment and was running late already. WRT your "antenna problem or
> opportunity". I made an antenna for WWVB, and also use it for NAA at 24
> KHz by adding an additional cap across it for resonance down there. It's
> better heads and shoulders than any ferrite antenna I ever made. 24 inch
> bicycle wheel, spokes removed and a space made in the wheel continuity by
> sawing it apart and adding a small block of wood. This also serves to hold
> an old ARCO tuning cap of high value, and an instrumentation amplifier
> made from three LM833 op amps.
>
> A layer of shipping plastic foam between the rim and 120 turns of HPT wire
> (#26 is a good number), then wrap it all up with a bit of squeezed on
> aluminum wrap. (Also not continuous, and grounded at the spacer.)
>
> With the inst, amp set for 60 dB of gain, I receive WWVB at about -40 dBm
> into the 50 Ohm input to a HP selective Voltmeter. Best ever ferrite was
> around 30 dB worse than this. I use it almost continuously for NAA
> monitoring of SIDs, and they never go out of detection even in the
> basement workshop.
>

> Regards and happy New Year.
> W4ZCB
>

## 162. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 05:20:15 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <9dSdnTBou5UbFQzanZ2dnUVZ_oqhnZ2d@comcast.com>
Source record: 5699

Thanks Dick.....it looks like a good site. It also shows that I have
quite a bit to learn about these things.

Pete

"Dirk Claessens" <No@way.invalid> wrote in message
news:mn.8b8f7d81738e52bc.59994@way.invalid...
> On 2008-01-17, Pete KE9OA (71.239.37.56) wrote in
> message <dcadnZsBbpgKgxLanZ2dnUVZ_v2pnZ2d@comcast.com>
>
>
>> Hi,
>>
>> Is there any kind of program that makes the calculations a bit easier? If
>> I knew how to do the calculations, I could throw the formula into a
>> spreadsheet. What I need to do is calculate the inductance with the
>> parameters of cross sectional area, length, position on the ferrite rod,
>> number of turns, and permeability of the ferrite material itself.
>> I would like to throw these parameters into the spreadsheet/program, and
>> let the software calculate the inductance for me.
>>
>> Pete
>
> Have a look here, see section 2 "Practical antenna design"
>
> <http://www.c-maxgroup.com/tech/antenna.php>
>
> --
> Dirk.
> No trees were killed in the creation of this message;
> however, many electrons were terribly inconvenienced.
>
>

## 163. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 05:24:49 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <uuadndA_ONIFFAzanZ2dnUVZ_uevnZ2d@comcast.com>
Source record: 5700

Oh, I figured as much, but I thought it would be a nice experiment to try
(can you tell that I am doing this out of boredom?).
Right now, I am working on that LW/MW active loopstick antenna.

Pete

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:bae1f5e5-f66e-4237-a891-7fa22a8326dc@t1g2000pra.googlegroups.com...
On Jan 15, 4:57 pm, "i3hev, mario held" <marioh...@tiscali.it> wrote:
> Hi Michael,
>
> msg wrote:
> > I wouldn't mind seeing that article too...
>
> if your address (minus underscores) is a valid one, you have mail :)
>
> > in the '80s I built some common type replacements using jfets and
> > bipolars and installed them in an HP scope.....
>
> I think that we all may want to learn the knack: in a near future this
> will probably be the only way to refurbish tube equipment... :)

I see huge lots of mil-surplus 6AU6's, 6CL6's, 6BA6's, 6AK5's etc.
moving through the surplus channels all the time, still.

Someday we'll run out but I suspect that transistors will be obsolete
before we use all those tubes up!

Tim.

## 164. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 05:49:09 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13p33e79kken49f@corp.supernews.com>
Source record: 5601

Dave wrote:
<snip>
> I would *love* a copy. My Hotmail address should work, but if it bounces
> for any reason, try
> d b e a n e (at) p d q (dot) n e t
>
> That one *will* work.

Sent to above yesterday; let me know if you didn't get it.

Michael

## 165. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 05:49:47 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13p33fdm56c80d7@corp.supernews.com>
Source record: 5602

Meregalli wrote:

<snip>
>
> Would you be so kind to send me the sad pdf?
> My Email is good
> Luca

Sent yesterday; let me know if you didn't get it.

Michael

# 166. SolderSmoke #74: 1st transistor QSO, Tunnel Diodes, Mixers, ZS6ADY Boatanchors QSO

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 06:00:18 UTC
From: "bill.meara@gmail.com" <bill.meara@gmail.com>
Message-ID: <235b6ec4-4c05-4c58-9f3f-7a45e22acd74@e25g2000prg.googlegroups.com>
Source record: 5603
Cross-posted to: rec.radio.amateur.homebrew, rec.radio.amateur.boatanchors, sci.electronics.basics, sci.astro.amateur

SolderSmoke!
A SHOW FOR ELECTRONICS HOMEBREWERS!

http://www.soldersmoke.com

Listen at: http://www.soldersmoke.com

SolderSmoke #74

January 18, 2008
Solar Cycle 24.
First transistor QSO.
Tunnel Diode Madness.
Rovers on Mars.
SETI.
BSEE in a can: EMRFD+LTSPICE+QRP-L.
Understanding mixers.
Kipling's Afghan Heliographs.
Tech Topics.
MAILBAG.
Part II of Andy, ZS6ADY, Boatanchors QSO.
KL7R SK.

Tired of listening to the The Foo Fighters or Shakira
on your I-Pod? Wouldn't you like to be able to carry
with
you the kinds of ham radio conversations that you
listen to while in your radio shack? Tune in to
SolderSmoke!

RSS FEED: You can subscribe to the program, have
them downloaded to your MP-3 player, and listen to
them at your convenience. To subscribe, just cut and
paste this URL into your I-poder (or similar)
software.
http://www.soldersmoke.com/soldersmoke.rss

If you don't have an MP3 player you can just go to the
site below and listen to the latest program (and
earlier editions) using the audio software on your
computer.

http://www.soldersmoke.com

All the programs are available here.

I hope you enjoy the program. Please send us
feedback.

73 from Rome
Bill M0HBR N2CQR CU2JL
http://www.gadgeteer.us

## 167. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 07:18:23 UTC
From: Meregalli <merega@tiscali.it>
Message-ID: <4791a442$0$21204$5fc30a8@news.tiscali.it>
Source record: 5604

msg wrote:
> Meregalli wrote:
>
> <snip>
>>
>> Would you be so kind to send me the sad pdf?
>> My Email is good
>> Luca
>
> Sent yesterday; let me know if you didn't get it.
>
> Michael

Dear Michael,until now I didn't receive anythig from you.
If you want to try again i'll post here my Email
mereganospamtiscali.it,
erase nospam to use it.
Regards Luca

## 168. AY11 or AEY12 tunnel diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 10:30:56 UTC
From: Hoytie Toytie <hoytie.toytie.008@hotmail.com>
Message-ID: <Ajkkj.2965$R_4.2303@newsb.telia.net>
Source record: 5605

They used to be "common as muck", and I bought loads of them from Henrys Radio, (202 Edgeware st, London). But that was more than a couple of years ago, since then I have moved house several times, moved country, had a divorce and had all my belongings stolen.

Does anyone have any AEY11 or AEY12 tunnel diodes left? I cant seem to find a supplier anymore.

BR Harry - harryvpo(at)hotmail(dot)com

## 169. Re: AY11 or AEY12 tunnel diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-19 11:04:28 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <lUuHI1S8kdkHFAiF@ifwtech.co.uk>
Source record: 5606

Hoytie Toytie wrote:
>They used to be "common as muck", and I bought loads of them from Henrys
>Radio, (202 Edgeware st, London). But that was more than a couple of years
>ago, since then I have moved house several times, moved country, had a
>divorce and had all my belongings stolen.
>
>Does anyone have any AEY11 or AEY12 tunnel diodes left? I cant seem to find
>a supplier anymore.

Many of these devices are about 30 years old, and a friend in the semiconductor industry speculated that, in that time, their extreme doping gradients may have relaxed by diffusion. So even if you could find some "new old stock", their characteristics may have changed significantly.

--

73 from Ian GM3SEK

## 170. Re: Detailed photos of Motorola/CCI EB104 Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 04:12:29 UTC
From: gb <w9nogbspam@arrlspamno.net>
Message-ID: <A8adnSFRXr6qVw_anZ2dnUVZ_u-unZ2d@comcast.com>
Source record: 5607

"Holger Doerschel" <newsgroups@pt100.net> wrote in message
news:5v9uu5F1liu0cU1@mid.individual.net...
> Hello,
>
> I bought the EB104 kit from CCI. The documentation is a little bit poor
> (black and white, poor copy). Has anyone dedailed photos of the assembled
> board?
>
> And:
> Has anybody some informations of an appicable low-pass filter or an
> diplexer
> (all bands inc. warc)?
>
>
> best regards
>
> Holger / DL9HDA

Have you looked at Mike Grierson, G3TSO homebrew work ???
http://www.qsl.net/g3tso/HFLinearFrameSet1.html

Mike is an award winning homebrew / transceiver builder :-)

w9gb

## 171. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 04:35:24 UTC
From: hexter@blazenet.net
Message-ID: <4792cf8b$0$1257$470ef3ce@news.pa.net>
Source record: 5608

In article <9d1040ff-8a30-4443-8bc7-dc5991daf999@v67g2000hse.googlegroups.com>,
hcm1955@gmail.com says...
>
>Does anyone in the group know anything about magnetrons? I planning to
>do some experiments in transmitting microwaves.
>
>I would like to use standard magnetrons from a microwave oven and
>believe I can beam further if operated at the same frequency and
>with the outputs in phase. I have no idea on how to do this. Please
>advise
>
>Cheers,
>Bert
>
>

There isn't any hamband for the magnetrons you are likely to get
your hands on, so it would be illeagal for you to 'beam' anywhere.
Multiple mags don't like to 'lock up' very well in pulse duty and
you surely won't be running any microwave oven mags in cw mode.
How would you verify if your kluge monster was in fact locked
together? Got any ghz range spectrum analyzers handy? Most mags
designed to be used in parallel power production have a built
in injection probe with an SMA or BNC fitting right on the mag.
So you are going to be beaming, and receiving with what? A spark
gap? You don't need, and couldn't handle the power of multiple
magnetrons. You can blow up every solid state device in your workshop
just by tearing the front door off your microwave oven and jumping
out the interlocks. Do you realize the body of the magnetron is
the anode and you will probably electrocute yourself before I can
find a sound reason for anybody but a genuine rf engineer to try
putting two magnetrons in phase lock parallel operation? Far longer
would you live throwing 20 pound propane tanks into a fire and
see how far they 'beam'.

## 172. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 05:10:44 UTC
From: "David L. Foreman" <davelf11@cox.net>
Message-ID: <otl5p35979be9r03ht0p06rmskla7386n2@4ax.com>
Source record: 5609
Body handling: HTML body converted to readable text

On Mon, 14 Jan 2008 14:50:50 -0600, "Pete KE9OA" wrote:

>Hi,
>
>Does anybody have a copy of the April 1977 QST? The article I am interested
>in the the one by Howard Sartori, entitled
>"solid tubes, a new life for old designs".
>If somebody could scan this article, I would be glad to pay them. Thanks!
>
>Pete KE9OA
>

Please add me to the list as well.
Thanks Much
Dave Foreman

## 173. RCA Receiving Tube Manual download links

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 17:55:04 UTC
From: Toadd6@gmail.com
Message-ID: <44a74c69-c119-40cf-9ca0-e4103e71187f@q39g2000hsf.googlegroups.com>
Source record: 5610
Cross-posted to: rec.radio.amateur.homebrew, rec.radio.amateur.boatanchors, rec.audio.tubes, rec.radio.amateur.equipment, rec.radio.amateur.misc

RCA Receiving Tube Manuals

RC-30 1975 edition
http://rapidshare.com/files/75244077/RC30.pdf.html

RC-26 1968 edition
http://rapidshare.com/files/85192789/RC26.pdf.html

RC-23 1964 edition
http://rapidshare.com/files/85190496/RC23.pdf.html

RC-20 1960 edition
http://rapidshare.com/files/85188444/RC20.pdf.html

RC-18 1956 edition
http://rapidshare.com/files/85184343/RC18.pdf.html

RC-17 1954 edition
http://rapidshare.com/files/85194596/RC17.pdf.html

RC-16 1950 edition
http://rapidshare.com/files/85196176/RC16.pdf.html

RC-15 1947 edition
http://rapidshare.com/files/85197151/RC15.pdf.html

# 174. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 18:40:39 UTC
From: "JRCCrabtree@gmail.com" <JRCCrabtree@gmail.com>
Message-ID: <77594df8-783f-40f7-98d1-71b36f619eae@h11g2000prf.googlegroups.com>
Source record: 5611
Body handling: HTML body converted to readable text

On Jan 17, 3:23 am, "Pete KE9OA" wrote:
> Hi,
>
> Is there any kind of program that makes the calculations a bit easier? If I
> knew how to do the calculations, I could throw the formula into a
> spreadsheet. What I need to do is calculate the inductance with the
> parameters of cross sectional area, length, position on the ferrite rod,
> number of turns, and permeability of the ferrite material itself.
> I would like to throw these parameters into the spreadsheet/program, and let
> the software calculate the inductance for me.
>
> Pete

Hello Pete

AFAIK there is no set of formulae which will do the job for you. What follows comes from E.C. Snelling, "Soft Ferrites: Properties and Applications", 2nd ed, 1988, p 155. Sadly this book's quality is exceeded by it's rarity.

Snelling starts off by saying that the inductance ratio mu(coil), or apparent permeability, of a coil when it has a ferrite core is diffiult to calculate, "since it depends upon on the geometry of the winding and the core and to some extent the core permeability".

Snelling goes on to present a simpler approach which "applies only to centrally placed windings". He starts by assuming that a "magnetically long cylinder" is covered over its whole length. (I do not know if these means that the coil is tight wound or not, or even whether this matters). He then goes on to state that the inductance of the coil is proportional to mu(rod) times the area times the number of turns squared divided by the length of the rod.

He then presents curves based on experimental data, based on coils where the centrally placed winding covered 5-100% of the coil, the initial permeability ranged from 15 to 1000, and the length/diameter ratios of the rod varied from 3 to 18. The results are shown on p. 155. Snelling comments that using the mean curve will produce an error of 12% or less.

The curve plots 10exp09 times L / (A.N.N.mu(rod)), against the fraction of the rod which is covered. The approximate values (fraction of rod covered first) are:
0.1 2.75
0.2 2.25

0.3 2.1
0.4 1.85
0.5 1.7
0.6 1.5
0.7 1.35
0.8 1.15
0.9 1.05
1.0 0.95

Note that you have to calcluate mu(rod), which depends upon the initial permeabilty of the ferrite, and the demagnetization factor. The demagnetization factor depends up the length /diameter ratio, and to some extent the intial permeability of the rod. You can read the demagnetization factor off a chart (Snelling p. 151), or read mu(rod) directly from a chart based upon the initial permability and l/d radio (Snelling p. 152). You will see the same chart at, eg,:
http://www.magneticsgroup.com/pdf/erods.pdf
To calculate mu(rod) you would have to able to calculate the demagnetization factor. I do not know how to do this. The calculation of mu(rod) is straightforward once the demagnetization factor is known.

Apparently the whole process above is only approximate. If you slide the winding away from the center of the core, then the inductance will decrease.. By how much I do not know. BTW, was this the way in which the coil inductance was adjusted in LW/MW radio sets during intial alignment?

I also vaguely recall reading some work done by W.J. Polydoroff on the inductance of coils with ferrite cores. A paper in 1945, and a book in 1960 come to mind. He took a slightly different approach. In those days the permeability of ferrite was relatively low. I have never compared his approach to Snelling's to see if they give approximately the same results. If I can find the stuff here, I will look a little harder.

73 John KC0G

## 175. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 19:12:12 UTC
From: You <you@shadow.orgs>
Message-ID: <you-0D71D6.10135220012008@netnews.worldnet.att.net>
Source record: 5612

In article <4792cf8b$0$1257$470ef3ce@news.pa.net>,
hexter@blazenet.net (gudmundur) wrote:

> Multiple mags don't like to 'lock up' very well in pulse duty and
> you surely won't be running any microwave oven mags in cw mode.

Bzzzt, Wrong assumption, would you like to try for what is behind Curtain
#2??????

ALL Consumer Microwave Ovens are using CW mode.... just where did you
get your idea, that they are pulsed from????? Your a Dufus.....

## 176. FS: Cushman Mobile Radio Application Testing Manuals on CD

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 22:50:06 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <DeQkj.1686$Ov2.1594@read2.cgocable.net>
Source record: 5613
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Have Cushman Mobile Radio Testing Applications Manuals that have been SCANNED onto a CD : (1) Transmitters (2) Receivers (3) Spectrum Monitor & Tracking Generator.
These Mobile Testing Procedures are based on the CE-50A & CE-5100 Series Monitors, but the methods apply to almost ANY Manufacturers monitor.

I will supply a CD with ALL the Manuals for $25 including mailing OR $10 per CD for each book.

See my other Service Manuals available: Click here for more Service Manuals available

Tnx for looking...Norm VE3CZI Rodemi (at) cogeco.ca

## 177. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 23:00:24 UTC
From: hexter@blazenet.net
Message-ID: <4793d287$0$1198$470ef3ce@news.pa.net>
Source record: 5614

In article <you-0D71D6.10135220012008@netnews.worldnet.att.net>,
you@shadow.orgs says...
>
>In article <4792cf8b$0$1257$470ef3ce@news.pa.net>,
> hexter@blazenet.net (gudmundur) wrote:
>
>> Multiple mags don't like to 'lock up' very well in pulse duty and
>> you surely won't be running any microwave oven mags in cw mode.
>
>Bzzzt, Wrong assumption, would you like to try for what is behind Curtain
>#2??????
>
>ALL Consumer Microwave Ovens are using CW mode.... just where did you
>get your idea, that they are pulsed from????? Your a Dufus.....

Hey dumb ass, they are running from 1/2 wave voltage doubled a.c.
and conduct on only 1/2 of the a.c. cycle. That isn't C.W. by the
definition of C.W. I'd call that a 50% duty cycle output which
is NOT c.w. by intelligent minds.

I didn't indictate that they were being pulsed either, I stated that
'pulsed magnetrons' don't like to lock up correctly. That is why
in extremely high power radar we no longer use multiple mags, and
never really did. Klystrons, klystrodes, and crossed field amplifiers
are the norm here. I'll bet my ETC and four gold service stripes
I forgot more about mags and waveguides than you ever knew.

The original poster seemed clueless and a danger to himself and
others with his experiments. Exactly the kind of guy you should
have as your C.E.O. of your 'New and improved c.w. microwave oven'
company.

Can't help thinking how much you look like your uncle dad!
I don't think you were ever one of my Seaman Recruits. I would
have taught you better. (In your words 'learned you gooder')
Dufus, yup, I been called worse, it kinda bounces right off
my rocker and lands where my crow can crap on it.

## 178. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 23:06:39 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fn0k5r$fvb$7@news.albasani.net>
Source record: 5615

gudmundur wrote:

> ...
> The original poster seemed clueless and a danger to himself and
> others with his experiments. ...

Heck, with a pair of MW RF shielding glasses, tin foil hat and a copper jockstrap, I'd fire one of those puppies up, in the open, in a heartbeat! <ROFLOL>

Regards,
JS

## 179. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-20 23:27:17 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fn0lcg$fvb$8@news.albasani.net>
Source record: 5616

John Smith wrote:
> gudmundur wrote:
>
>> ...
>> The original poster seemed clueless and a danger to himself and
>> others with his experiments. ...
>
> Heck, with a pair of MW RF shielding glasses, tin foil hat and a copper
> jockstrap, I'd fire one of those puppies up, in the open, in a
> heartbeat! <ROFLOL>
>
> Regards,
> JS

This all reminds me, back in the early 90's I dropped back to college for some refresher courses. Circulating on the net was a picture of supposed NY policemen posing with a microwave oven with a horn antenna attached to the front--looked as if it was constructed of sheet metal.

The article spoke of this "weapon" being used by one neighbor at another apartment neighbor ...

Anyone remember seeing this particular article? I have search the net several times and unable to find it. It may have even been a fraud, but was well done if so.

Anyway, I would get a kick out of seeing it again and making it available for others to view.

Regards,
JS

## 180. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-21 01:31:18 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4793f5e2$0$31796$4c368faf@roadrunner.com>
Source record: 5617
Body handling: HTML body converted to readable text

"Pete KE9OA" wrote in message
news:--KdnVxU1fW4VhbanZ2dnUVZ_hmtnZ2d@comcast.com...
> Hi,
>
> Does anybody have a copy of the April 1977 QST? The article I am
> interested in the the one by Howard Sartori, entitled
> "solid tubes, a new life for old designs".
> If somebody could scan this article, I would be glad to pay them. Thanks!
>
> Pete KE9OA
>

I noticed the local library is getting rid of it microfilm copies of
magazines replacing them with CDs. It probably wont be long until illegal
copies of all the ham mags are all over the net.

Jimmie

## 181. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-21 02:17:49 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <hhTkj.13250$R55.7630@newsfe13.lga>
Source record: 5618

"gudmundur" <hexter@blazenet.net> wrote in message
news:4792cf8b$0$1257$470ef3ce@news.pa.net...
> In article
> <9d1040ff-8a30-4443-8bc7-dc5991daf999@v67g2000hse.googlegroups.com>,
> hcm1955@gmail.com says...
>>
>>Does anyone in the group know anything about magnetrons? I planning to
>>do some experiments in transmitting microwaves.
>>
>>I would like to use standard magnetrons from a microwave oven and
>>believe I can beam further if operated at the same frequency and
>>with the outputs in phase. I have no idea on how to do this. Please
>>advise
>>
>>Cheers,
>>Bert
>>
>>
>
> There isn't any hamband for the magnetrons you are likely to get
> your hands on, so it would be illeagal for you to 'beam' anywhere.
> Multiple mags don't like to 'lock up' very well in pulse duty and
> you surely won't be running any microwave oven mags in cw mode.
> How would you verify if your kluge monster was in fact locked
> together? Got any ghz range spectrum analyzers handy? Most mags
> designed to be used in parallel power production have a built
> in injection probe with an SMA or BNC fitting right on the mag.
> So you are going to be beaming, and receiving with what? A spark
> gap? You don't need, and couldn't handle the power of multiple
> magnetrons. You can blow up every solid state device in your workshop
> just by tearing the front door off your microwave oven and jumping
> out the interlocks. Do you realize the body of the magnetron is
> the anode and you will probably electrocute yourself before I can
> find a sound reason for anybody but a genuine rf engineer to try
> putting two magnetrons in phase lock parallel operation? Far longer
> would you live throwing 20 pound propane tanks into a fire and
> see how far they 'beam'.
>
Hi

the inagural issue of Communications Quarterly Magazine ran an
article on phase locking microwave oven magnetrons for ham
use.

Regards

Peter K1ZJH

## 182. Re: RCA Receiving Tube Manual download links

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-21 04:30:17 UTC
From: Chuck Harris <cf-NO-SPAM-harris@erols.com>
Message-ID: <b5qdnYpBp9G9vQnanZ2dnUVZ_uXinZ2d@rcn.net>
Source record: 5619
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.audio.tubes,rec.radio.amateur.equipment,rec.radio.amateur.misc

Toadd6@gmail.com wrote:
> RCA Receiving Tube Manuals
>
> RC-30 1975 edition
> http://rapidshare.com/files/75244077/RC30.pdf.html
>
> RC-26 1968 edition
> http://rapidshare.com/files/85192789/RC26.pdf.html
>
> RC-23 1964 edition
> http://rapidshare.com/files/85190496/RC23.pdf.html
>
> RC-20 1960 edition
> http://rapidshare.com/files/85188444/RC20.pdf.html
>
> RC-18 1956 edition
> http://rapidshare.com/files/85184343/RC18.pdf.html
>
> RC-17 1954 edition
> http://rapidshare.com/files/85194596/RC17.pdf.html
>
> RC-16 1950 edition
> http://rapidshare.com/files/85196176/RC16.pdf.html
>
> RC-15 1947 edition
> http://rapidshare.com/files/85197151/RC15.pdf.html

Thanks for making the databooks available, but boy
Rapidshare.com is sure a pain in the a$$!

20 minutes minimum between downloads, and a 2 minute
timer to make sure you sit and stare at the screen before
entering a code you read off of the screen.

Bah!

-Chuck

## 183. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-21 08:47:57 UTC
From: Steve H <g0lmv@yahoo.co.uk>
Message-ID: <fn1m7p$83u$1@aioe.org>
Source record: 5620

John Smith wrote:
> John Smith wrote:
>> gudmundur wrote:
>>
>>> ...
>>> The original poster seemed clueless and a danger to himself and
>>> others with his experiments. ...
>>
>> Heck, with a pair of MW RF shielding glasses, tin foil hat and a
>> copper jockstrap, I'd fire one of those puppies up, in the open, in a
>> heartbeat! <ROFLOL>
>>
>> Regards,
>> JS
>
> This all reminds me, back in the early 90's I dropped back to college
> for some refresher courses. Circulating on the net was a picture of
> supposed NY policemen posing with a microwave oven with a horn antenna
> attached to the front--looked as if it was constructed of sheet metal.
>
> The article spoke of this "weapon" being used by one neighbor at another
> apartment neighbor ...
>
> Anyone remember seeing this particular article? I have search the net
> several times and unable to find it. It may have even been a fraud, but
> was well done if so.
>
> Anyway, I would get a kick out of seeing it again and making it
> available for others to view.
>
> Regards,
> JS
http://www.metacafe.com/watch/587507/microwave_hack_secret_power/

Could this be a cure for noisy switch mode power supplies??

Steve H

## 184. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-21 09:58:48 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <M4idnZKaWr1T8QnanZ2dnUVZ_hadnZ2d@comcast.com>
Source record: 5621
Body handling: HTML body converted to readable text

Thanks John,

I appreciate the info. I had a couple of databooks/textbooks about this years ago, but of course in my infinite wisdom I gave them away a few years back. I didn't think I would need them!

Pete

wrote in message
news:77594df8-783f-40f7-98d1-71b36f619eae@h11g2000prf.googlegroups.com...
On Jan 17, 3:23?am, "Pete KE9OA" wrote:
> Hi,
>
> Is there any kind of program that makes the calculations a bit easier? If
> I
> knew how to do the calculations, I could throw the formula into a
> spreadsheet. What I need to do is calculate the inductance with the
> parameters of cross sectional area, length, position on the ferrite rod,
> number of turns, and permeability of the ferrite material itself.
> I would like to throw these parameters into the spreadsheet/program, and
> let
> the software calculate the inductance for me.
>
> Pete

Hello Pete

AFAIK there is no set of formulae which will do the job for you. What follows comes from E.C. Snelling, "Soft Ferrites: Properties and Applications", 2nd ed, 1988, p 155. Sadly this book's quality is exceeded by it's rarity.

Snelling starts off by saying that the inductance ratio mu(coil), or apparent permeability, of a coil when it has a ferrite core is diffiult to calculate, "since it depends upon on the geometry of the winding and the core and to some extent the core permeability".

Snelling goes on to present a simpler approach which "applies only to centrally placed windings". He starts by assuming that a "magnetically long cylinder" is covered over its whole length. (I do not know if these means that the coil is tight wound or not, or even whether this matters). He then goes on to state that the inductance of the coil is proportional to mu(rod) times the area times the number of turns squared divided by the length of the rod.

He then presents curves based on experimental data, based on coils where the centrally placed winding covered 5-100% of the coil, the initial permeability ranged from 15 to 1000, and the length/diameter ratios of the rod varied from 3 to 18. The results are shown on p. 155. Snelling comments that using the mean curve will produce an error of 12% or less.

The curve plots 10exp09 times L / (A.N.N.mu(rod)), against the fraction of the rod which is covered. The approximate values (fraction of rod covered first) are:
0.1 2.75
0.2 2.25
0.3 2.1
0.4 1.85
0.5 1.7
0.6 1.5
0.7 1.35
0.8 1.15
0.9 1.05
1.0 0.95

Note that you have to calcluate mu(rod), which depends upon the initial permeabilty of the ferrite, and the demagnetization factor. The demagnetization factor depends up the length /diameter ratio, and to some extent the intial permeability of the rod. You can read the demagnetization factor off a chart (Snelling p. 151), or read mu(rod) directly from a chart based upon the initial permability and l/d radio (Snelling p. 152). You will see the same chart at, eg,:
http://www.magneticsgroup.com/pdf/erods.pdf
To calculate mu(rod) you would have to able to calculate the demagnetization factor. I do not know how to do this. The calculation of mu(rod) is straightforward once the demagnetization factor is known.

Apparently the whole process above is only approximate. If you slide the winding away from the center of the core, then the inductance will decrease.. By how much I do not know. BTW, was this the way in which the coil inductance was adjusted in LW/MW radio sets during intial alignment?

I also vaguely recall reading some work done by W.J. Polydoroff on the inductance of coils with ferrite cores. A paper in 1945, and a book in 1960 come to mind. He took a slightly different approach. In those days the permeability of ferrite was relatively low. I have never compared his approach to Snelling's to see if they give approximately the same results. If I can find the stuff here, I will look a little harder.

73 John KC0G

## 185. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-21 18:26:26 UTC
From: You <you@shadow.orgs>
Message-ID: <you-723A71.09275621012008@netnews.worldnet.att.net>
Source record: 5622

In article <4793d287$0$1198$470ef3ce@news.pa.net>,
hexter@blazenet.net (gudmundur) wrote:

> In article <you-0D71D6.10135220012008@netnews.worldnet.att.net>,
> you@shadow.orgs says...
> >
> >In article <4792cf8b$0$1257$470ef3ce@news.pa.net>,
> > hexter@blazenet.net (gudmundur) wrote:
> >
> >> Multiple mags don't like to 'lock up' very well in pulse duty and
> >> you surely won't be running any microwave oven mags in cw mode.
> >
> >Bzzzt, Wrong assumption, would you like to try for what is behind Curtain
> >#2??????
> >
> >ALL Consumer Microwave Ovens are using CW mode.... just where did you
> >get your idea, that they are pulsed from????? Your a Dufus.....
>
> Hey dumb ass, they are running from 1/2 wave voltage doubled a.c.
> and conduct on only 1/2 of the a.c. cycle. That isn't C.W. by the
> definition of C.W. I'd call that a 50% duty cycle output which
> is NOT c.w. by intelligent minds.
>
> I didn't indictate that they were being pulsed either, I stated that
> 'pulsed magnetrons' don't like to lock up correctly. That is why
> in extremely high power radar we no longer use multiple mags, and
> never really did. Klystrons, klystrodes, and crossed field amplifiers
> are the norm here. I'll bet my ETC and four gold service stripes
> I forgot more about mags and waveguides than you ever knew.
>
> The original poster seemed clueless and a danger to himself and
> others with his experiments. Exactly the kind of guy you should
> have as your C.E.O. of your 'New and improved c.w. microwave oven'
> company.
>
> Can't help thinking how much you look like your uncle dad!
> I don't think you were ever one of my Seaman Recruits. I would
> have taught you better. (In your words 'learned you gooder')
> Dufus, yup, I been called worse, it kinda bounces right off
> my rocker and lands where my crow can crap on it.

Ok Smart Guy, just tell us ALL about how CW means that once you turn
the RF emitter ON, It must stay ON with 100% duty cycle. Since every
HAM Knows that CW doesn't mean 100% Duty Cycle. Where did you get the
Idea that the OP would be using the Oven Magnitrons Power Supply, as is,

instead of building his own, and running it Full Wave, at 100% Duty Cycle? He doesn't say one way or the other, so your ASSUMPTION is just that, another one of your Flab over Beltline Dufus assumptions. Your explanation is nothing more than Cheap Squid Crap..... that comes from all that Gold Striping that hangs off your sleeve..... Good thing that the Navy keeps you locked up, down in the bilge, and not teaching Young Sculls full of Mush, the basics of High Power RF Generation.

Sonny, you got a lot to learn, best you go back to A School, at NAS Memphis and try again, to get it right..... It is amazing to "Me" that the Blue Canoes, can even find their way out of harbor, if your an example of their ET's, and Radarmen. Fortunately for the rest of us, it would seem that our Navy has some better folks than you running the show..... and have for generations..... by the way...you would lose your bet..... Sonny.....

## 186. Re: RCA Receiving Tube Manual download links

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-21 18:27:56 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-60215A.09293521012008@netnews.worldnet.att.net>
Source record: 5623
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.audio.tubes,rec.radio.amateur.equipment,rec.radio.amateur.misc

In article <b5qdnYpBp9G9vQnanZ2dnUVZ_uXinZ2d@rcn.net>,
Chuck Harris <cf-NO-SPAM-harris@erols.com> wrote:

> Toadd6@gmail.com wrote:
> > RCA Receiving Tube Manuals
> >
> > RC-30 1975 edition
> > http://rapidshare.com/files/75244077/RC30.pdf.html
> >
> > RC-26 1968 edition
> > http://rapidshare.com/files/85192789/RC26.pdf.html
> >
> > RC-23 1964 edition
> > http://rapidshare.com/files/85190496/RC23.pdf.html
> >
> > RC-20 1960 edition
> > http://rapidshare.com/files/85188444/RC20.pdf.html
> >
> > RC-18 1956 edition
> > http://rapidshare.com/files/85184343/RC18.pdf.html
> >
> > RC-17 1954 edition
> > http://rapidshare.com/files/85194596/RC17.pdf.html
> >
> > RC-16 1950 edition
> > http://rapidshare.com/files/85196176/RC16.pdf.html
> >
> > RC-15 1947 edition
> > http://rapidshare.com/files/85197151/RC15.pdf.html
>
> Thanks for making the databooks available, but boy
> Rapidshare.com is sure a pain in the a$$!
>
> 20 minutes minimum between downloads, and a 2 minute
> timer to make sure you sit and stare at the screen before
> entering a code you read off of the screen.
>
> Bah!
>
> -Chuck

Now if only someone would post the RCA Transmitting Tube Manual
I could get ride of my, very ragged copy, that is Thumbed to death.

Bruce in alaska

--
Bruce in alaska
add <path> after <fast> to reply

## 187. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 02:59:16 UTC
From: Dave <db5151@hotmail.com>
Message-ID: <13pan0nludbb8a5@corp.supernews.com>
Source record: 5624

Hey Michael,

Somehow, it never showed up. Did you send it to my Hotmail or my other one (with the extra spaces in it)? Could you try it again?

Many thanks,

Dave

"msg" <msg@_cybertheque.org_> wrote in message news:13p33e79kken49f@corp.supernews.com...
> Dave wrote:
> <snip>
>> I would *love* a copy. My Hotmail address should work, but if it bounces
>> for any reason, try
>> d b e a n e (at) p d q (dot) n e t
>>
>> That one *will* work.
>
> Sent to above yesterday; let me know if you didn't get it.
>
> Michael

## 188. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 03:24:07 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13paoeh1du1bqa7@corp.supernews.com>
Source record: 5625

Dave wrote:

> Hey Michael,
>
> Somehow, it never showed up. Did you send it to my Hotmail or my other one
> (with the extra spaces in it)? Could you try it again?

Second attempt to pdq _dot_ net made; let me know if it doesn't arrive.

Michael

## 189. Broke down and bought one ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 08:47:34 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fn4aiu$opl$1@news.albasani.net>
Source record: 5626
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

After varying success with homebrew SDRs' (software defined radios)
built on PCI breadboards stuck into old PCs', I made the jump into a
commercial one--bit "pricey" though--a little under five grand for the
Flex-5000C ... I am as anxious as a kid waiting his order from the back
of a comic book! (they still do that, don't they?) :-)

Regards,
JS

## 190. Re: Broke down and bought one ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 08:52:54 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fn4asu$opl$2@news.albasani.net>
Source record: 5627
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

John Smith wrote:
> After varying success with homebrew SDRs' (software defined radios)
> built on PCI breadboards stuck into old PCs', I made the jump into a
> commercial one--bit "pricey" though--a little under five grand for the
> Flex-5000C ... I am as anxious as a kid waiting his order from the back
> of a comic book! (they still do that, don't they?) :-)
>
> Regards,
> JS

Forgot to include the URL, in case anyone else is interested:

http://www.flex-radio.com/Products.aspx?topic=f5k_features

Regards,
JS

## 191. advanced technology in your construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 16:58:32 UTC
From: "stella.is.rani@gmail.com" <stella.is.rani@gmail.com>
Message-ID: <00e3b9ca-d527-4fe0-9479-d2ba148b1cfb@e6g2000prf.googlegroups.com>
Source record: 5628

advanced technology in your construction

details and more information get together

.....
http://padmagirl.blogspot.com
.....

with best wishes

## 192. Re: RCA Receiving Tube Manual download links

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 19:13:05 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-273D61.10143922012008@netnews.worldnet.att.net>
Source record: 5629
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.audio.tubes,rec.radio.amateur.equipment,rec.radio.amateur.misc

In article <i8s9p3tl1fi4mjkos5i363gssrutjbh9m2@4ax.com>,
flipper <flipper@fish.net> wrote:

> >Now if only someone would post the RCA Transmitting Tube Manual
> >I could get ride of my, very ragged copy, that is Thumbed to death.
> >
> >Bruce in alaska
>
> 1938 and 1956 editions here
>
> http://www.pmillett.com/tube_data.htm

thanks a lot...I appreciate the Link....

--
Bruce in alaska
add <path> after <fast> to reply

## 193. Re: Broke down and bought one ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 21:22:22 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <j8tlj.25640$3b7.19684@newsfe23.lga>
Source record: 5630
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"John Smith" <assemblywizard@gmail.com> wrote in message
news:fn4asu$opl$2@news.albasani.net...
> John Smith wrote:
>> After varying success with homebrew SDRs' (software defined radios) built
>> on PCI breadboards stuck into old PCs', I made the jump into a commercial
>> one--bit "pricey" though--a little under five grand for the Flex-5000C
>> ... I am as anxious as a kid waiting his order from the back of a comic
>> book! (they still do that, don't they?) :-)
>>
>> Regards,

Too rich for my pockets, but the specs are eye openers!! Let us know
how it plays!

## 194. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 22:06:30 UTC
From: hexter@blazenet.net
Message-ID: <479668e5$0$1251$470ef3ce@news.pa.net>
Source record: 5631

In article <9d1040ff-8a30-4443-8bc7-dc5991daf999@v67g2000hse.googlegroups.com>,
hcm1955@gmail.com says...
>
>Does anyone in the group know anything about magnetrons? I planning to
>do some experiments in transmitting microwaves.
>
>I would like to use standard magnetrons from a microwave oven and
>believe I can beam further if operated at the same frequency and
>with the outputs in phase. I have no idea on how to do this. Please
>advise
>
>Cheers,
>Bert
>

Kind of a strange side note to the syncing issue,
There are commercial microwave ovens that use 2 magnetrons.
These ovens are usually in food courts of large business
offices or factories. They are 220vac powered of course.
Since a single mag oven produces power only on a small
portion of one half of an a.c. line cycle they did a neat
trick in the twin mag ovens and switched the line connections
to one power transformer. (the ovens have two complete and
separate h.v. supplies) So one mag makes power on the positive
half of the line cycle and the other makes power on the
negative half of the line cycle. Strangely enough I have
run into several units having the same 'in phase' line
connection (by accident or tampering I guess) and they
still work fine. Both mags tightly coupled to the cavity
producing power at the same time on the same half of the
line cycle. Talk about injection locking!!! 2 mags looking
right at each other, and I have not found their service
life to be any shorter but they take longer to pop popcorn.
Probably several reasons for that, but a differance you can
see and measure with a watch. Just by switching the primary
transformer leads back to the 'normal' out of phase condition
popcorn gets done faster.

## 195. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-22 22:42:28 UTC
From: Dave <db5151@hotmail.com>
Message-ID: <13pcsau839pfn53@corp.supernews.com>
Source record: 5632

GOT IT! Thank you, so much.

Dave

"msg" <msg@_cybertheque.org_> wrote in message
news:13paoeh1du1bqa7@corp.supernews.com...
> Dave wrote:
>
>> Hey Michael,
>>
>> Somehow, it never showed up. Did you send it to my Hotmail or my other
>> one (with the extra spaces in it)? Could you try it again?
>
> Second attempt to pdq _dot_ net made; let me know if it doesn't arrive.
>
> Michael

## 196. 6146 data

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 02:18:48 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4796a402$0$22578$4c368faf@roadrunner.com>
Source record: 5633

I am trying to build a class AB linear amp usig a 6146, plate voltage will be about 600 volts. What's the peak drive voltage for this configuration.

Jimmie

## 197. Re: Broke down and bought one ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 02:21:09 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fn68ak$31n$2@news.albasani.net>
Source record: 5634
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Tio Pedro wrote:

> ...
> Too rich for my pockets, but the specs are eye openers!! Let us know
> how it plays!
>
>
>

I picked up an extra contract which only took a portion of the man hours
I had alloted--the wife needed a new car, this made that possible--got
that for her, she said, "I feel guilty, what would you like?"
MUHAHAHAHAHAHA!!!!

The rest is history ... I have downloaded the manual offline and will be
ready to put it to work as soon as I have it from the box!

Will let 'ya know!

Regards,
JS

## 198. Re: 6146 data

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 02:44:07 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <XRxlj.311911$Fc.250450@attbi_s21>
Source record: 5635

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:4796a402$0$22578$4c368faf@roadrunner.com...
>I am trying to build a class AB linear amp usig a 6146, plate voltage will
>be about 600 volts. What's the peak drive voltage for this configuration.
>
> Jimmie
About one Volt less than the DC bias on the grid.

W4ZCB
>

## 199. Re: Ferrite loop antenna for LW/MW band

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 15:14:27 UTC
From: amdx <amdx@knology.net>
Message-ID: <1f182$479758aa$18d6b40c$6746@KNOLOGY.NET>
Source record: 5636
Body handling: HTML body converted to readable text

"Pete KE9OA" wrote in message
news:dcadnZsBbpgKgxLanZ2dnUVZ_v2pnZ2d@comcast.com...
> Hi,
>
> Is there any kind of program that makes the calculations a bit easier? If
> I knew how to do the calculations, I could throw the formula into a
> spreadsheet. What I need to do is calculate the inductance with the
> parameters of cross sectional area, length, position on the ferrite rod,
> number of turns, and permeability of the ferrite material itself.
> I would like to throw these parameters into the spreadsheet/program, and
> let the software calculate the inductance for me.
>
> Pete

Here's a great site with detailed info about ferrite rods.
http://www.bentongue.com/xtalset/29MxQFL/29MxQFL.html

Here's a long list of articles by the same author.
http://www.bentongue.com/xtalset/xtalset.html

The home page of all the above.
http://www.bentongue.com/

Mike

## 200. 23cm / 1.3GHz FM ATV "bare bones" modules

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 17:49:21 UTC
From: MarkAren <markaren10@yahoo.com>
Message-ID: <9e94ed16-92d1-440e-a2a4-086c4253bab4@i3g2000hsf.googlegroups.com>
Source record: 5637

Hi Guys,

Anyone know where I can buy the 50mW TX and RX modules - I believe
they are controlled using I2C.

I don't need the external uP and PCB - just the modules themselves.

The modules are around 1.5 x 2", housed in a tin box with feedthroughs
for signal and control. RF is on an SMA.

Manufacturers name and model number would also be very useful to help
with an eBay search...

Many thanks,

Mark

## 201. Re: Broke down and bought one ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 18:41:01 UTC
From: Jerseyj <jerseyj69@comcast.net>
Message-ID: <jerseyj69-DBA080.13410123012008@newsgroups.comcast.net>
Source record: 5638
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <fn4aiu$opl$1@news.albasani.net>,
John Smith <assemblywizard@gmail.com> wrote:

> After varying success with homebrew SDRs' (software defined radios)
> built on PCI breadboards stuck into old PCs', I made the jump into a
> commercial one--bit "pricey" though--a little under five grand for the
> Flex-5000C ... I am as anxious as a kid waiting his order from the back
> of a comic book! (they still do that, don't they?) :-)
>
> Regards,
> JS

Mmmmm...given how long I own my radios, and given how quickly pc
hardware improves, I'd probably go for the model that doesn't include
the integrated PC.

Jerry

## 202. Re: Broke down and bought one ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 18:55:58 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fn82jr$sls$1@news.albasani.net>
Source record: 5639
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Jerseyj wrote:

> ...
> Mmmmm...given how long I own my radios, and given how quickly pc
> hardware improves, I'd probably go for the model that doesn't include
> the integrated PC.
>
> Jerry

The firmware is upgradeable, they promise to allow you access to any new versions of the SDR software.

The CPU is an intel dual core; Just how much processing power do you need to run a radio? But then, you can cruise the web on this "radio!", run other apps (think EZNEC here), etc.

Also, if you need to control it remotely, you can still do so from another computer via firewire (say put the transceiver in your trunk and run it from a laptop in your passenger compartment), LAN, or WAN--wireless-ly. Indeed, you can control this rig from anywhere in the world using VOIP!

Personally, I thought it time to buy. Will certainly beat anything I can homebrew here ... your mileage may vary.

Regards,
JS

## 203. Re: Radio reception gone wacky

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-23 21:01:55 UTC
From: Big Rich Soprano <BucSoprano@gmail.com>
Message-ID: <0rafp31unb82ok2ehh8i1ut14fjk0jfk19@4ax.com>
Source record: 5640

>Perhaps this is what's causing your problem?

No that's not it at all. I live in Lebanon, Pa and the local radio station hijacks my shortwave rcvr in FM mode all the time. More watts means more listeners!

## 204. Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 04:10:01 UTC
From: jblandrum@gmail.com
Message-ID: <3ab8579a-b03a-4234-8552-52ac8a990f86@l32g2000hse.googlegroups.com>
Source record: 5641

I'm curious about how I might modify say my Aviation Radio (my hand held spare I keep in case of lost electric in an aircraft). To pick up amateur bands as well as the Aviation bands.

I'm not interested in the slightest as to whether or not this is legal, I'm simply looking for educational purposes.
I wanted to get one and then I became curious ... as to how difficult it would be or how it would be done, what kind of reading I would do if I wanted to build/modify any radio etc.

## 205. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 11:59:01 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <tvidnVIowdIb4AXanZ2dnUVZ_vWtnZ2d@bright.net>
Source record: 5642

Well, Yaesu USED to make a handheld aviation/2M radio, but they don't anymore. I believe it was a model VXA-xxx (can't remember what number the x's were). Might look on ebay.

One problem you'll have is aviation band is AM and the 2M ham stuff is generally FM, so you'd need to build an FM detector. Not sure if you could "hack" the microprocessor to tune up to the 2M band...

Scott

jblandrum@gmail.com wrote:
> I'm curious about how I might modify say my Aviation Radio (my hand
> held spare I keep in case of lost electric in an aircraft). To pick up
> amateur bands as well as the Aviation bands.
>
> I'm not interested in the slightest as to whether or not this is
> legal, I'm simply looking for educational purposes.
> I wanted to get one and then I became curious ... as to how difficult
> it would be or how it would be done, what kind of reading I would do
> if I wanted to build/modify any radio etc.

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

## 206. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 12:06:38 UTC
From: Edward Feustel <efeustel@hughes.net>
Message-ID: <rdvgp3tpqroibdcb4pnluoprj4165igd92@4ax.com>
Source record: 5643

On Wed, 23 Jan 2008 20:10:01 -0800 (PST), jblandrum@gmail.com wrote:

>I'm curious about how I might modify say my Aviation Radio (my hand
>held spare I keep in case of lost electric in an aircraft). To pick up
>amateur bands as well as the Aviation bands.
>
>I'm not interested in the slightest as to whether or not this is
>legal, I'm simply looking for educational purposes.
>I wanted to get one and then I became curious ... as to how difficult
>it would be or how it would be done, what kind of reading I would do
>if I wanted to build/modify any radio etc.

As I understand it, aviation radios use frequency modulation.
If you are interested in the vhf or uhf amateur transmissions,
then you can build a simple converter in which the portions of
the bands you are interested can be converted to be presented
in the aviation bands.

Your best bets for dealing with other modulation modes such as cw and
ssb is to either buy an older transceiver or shortwave receiver with
beat frequency oscillator (or ssb reception). Alternatively you can
get a receiver kit or build a simple regenerative receiver.

In both cases, an investment in the ARRL's Amateur Radio Handbook
is advisable. An edition after about 1990 (they are done yearly)
would be appropriate.
73,
Ed, N5EI

## 207. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 13:36:44 UTC
From: radiosrfun <radiosrfun@radiosrfun.com>
Message-ID: <47989465$0$1218$ecde5a14@news.coretel.net>
Source record: 5644

"Edward Feustel" <efeustel@hughes.net> wrote in message
news:rdvgp3tpqroibdcb4pnluoprj4165igd92@4ax.com...
> On Wed, 23 Jan 2008 20:10:01 -0800 (PST), jblandrum@gmail.com wrote:
>
>>I'm curious about how I might modify say my Aviation Radio (my hand
>>held spare I keep in case of lost electric in an aircraft). To pick up
>>amateur bands as well as the Aviation bands.
>>
>>I'm not interested in the slightest as to whether or not this is
>>legal, I'm simply looking for educational purposes.
>>I wanted to get one and then I became curious ... as to how difficult
>>it would be or how it would be done, what kind of reading I would do
>>if I wanted to build/modify any radio etc.
>
> As I understand it, aviation radios use frequency modulation.
> If you are interested in the vhf or uhf amateur transmissions,
> then you can build a simple converter in which the portions of
> the bands you are interested can be converted to be presented
> in the aviation bands.
>
> Your best bets for dealing with other modulation modes such as cw and
> ssb is to either buy an older transceiver or shortwave receiver with
> beat frequency oscillator (or ssb reception). Alternatively you can
> get a receiver kit or build a simple regenerative receiver.
>
> In both cases, an investment in the ARRL's Amateur Radio Handbook
> is advisable. An edition after about 1990 (they are done yearly)
> would be appropriate.
> 73,
> Ed, N5EI

Aviation uses "AM" - Amplitude Modulation

## 208. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 13:50:43 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <20f8deac-ac8f-48b3-ab96-ee14b38266c5@v46g2000hsv.googlegroups.com>
Source record: 5645

On Jan 23, 11:10 pm, jbland...@gmail.com wrote:
> I'm curious about how I might modify say my Aviation Radio (my hand
> held spare I keep in case of lost electric in an aircraft). To pick up
> amateur bands as well as the Aviation bands.
>
> I'm not interested in the slightest as to whether or not this is
> legal, I'm simply looking for educational purposes.
> I wanted to get one and then I became curious ... as to how difficult
> it would be or how it would be done, what kind of reading I would do
> if I wanted to build/modify any radio etc.

Aviation radios are 117-138 MHz AM modulation. You can either cut some diodes in the PLL to move them to 2M (144 MHz) or put in new crystals to move them to 2M. But... there isn't much AM activity on 2M (no insult intended for the AM diehards, I appreciate their efforts) it's almost all FM and you won't be happy. AM demodulators kinda sorta will demodulate some FM signals legibly but you won't have the fine-tuning controls you'd need to do a good job.

All the HF bands will use predominately CW or SSB or other digital modes that are not demodulated well by an AM receiver. While there is some AM activity there too, your aviation receiver's front end would never let you receive on the HF bands.

Tim N3QE

## 209. Re: 23cm / 1.3GHz FM ATV "bare bones" modules

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 16:57:09 UTC
From: Sjoerd <pe2svn@gEEmail.com>
Message-ID: <d07c4$4798c373$4df9bb2c$7134@news.chello.nl>
Source record: 5646

MarkAren schreef:
> Hi Guys,
>
> Anyone know where I can buy the 50mW TX and RX modules - I believe
> they are controlled using I2C.
>
> I don't need the external uP and PCB - just the modules themselves.
>
> The modules are around 1.5 x 2", housed in a tin box with feedthroughs
> for signal and control. RF is on an SMA.
>
> Manufacturers name and model number would also be very useful to help
> with an eBay search...
>
> Many thanks,
>
> Mark

It is in German, but it might help you...

http://www.lechner-cctv.de/artikel_uebersicht.php?KAT=95&LANG=EN&mwdSID=j35vc9g2jl3a7s523boofplks3

Good luck,

Sjoerd

## 210. Re: 23cm / 1.3GHz FM ATV "bare bones" modules

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 18:08:40 UTC
From: MarkAren <markaren10@yahoo.com>
Message-ID: <53458c7b-dbc0-4d9f-af2d-b0ae80ba794b@1g2000hsl.googlegroups.com>
Source record: 5647

On Jan 25, 5:57 am, Sjoerd <pe2...@gEEmail.com> wrote:
> MarkAren schreef:
>
>
>
>
>
> > Hi Guys,
>
> > Anyone know where I can buy the 50mW TX and RX modules - I believe
> > they are controlled using I2C.
>
> > I don't need the external uP and PCB - just the modules themselves.
>
> > The modules are around 1.5 x 2", housed in a tin box with feedthroughs
> > for signal and control. RF is on an SMA.
>
> > Manufacturers name and model number would also be very useful to help
> > with an eBay search...
>
> > Many thanks,
>
> > Mark
>
> It is in German, but it might help you...
>
> http://www.lechner-cctv.de/artikel_uebersicht.php?KAT=95&LANG=EN&mwdS...
>
> Good luck,
>
> Sjoerd- Hide quoted text -
>
> - Show quoted text -

Very good.

Thanks, Mark

## 211. Re: Broke down and bought one ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 19:37:16 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <fnapd7$gv5$2@news.albasani.net>
Source record: 5648
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Steve H wrote:

>> ...
> As a short term investment in a radio it may not be bad value but in
> this fast changing market that has not yet had any of the big 4 players
> make a move the resale value in 5 years may be rather lower than you
> would expect for a conventional radio - think of the value of a 2002
> computer with a then state of the art sound card.
>
>
> Steve H (Luddite)

Steve:

You know I can hardly wait to lay hands on the darn thing; and, you know it will live with me for a day and, THEN, I will have the case off it.

You did see the sentence which acknowledges it has an ITX board in it (a miniature motherboard!) In effect, I am just buying a computer which knows how to be a radio ...

I tell you, I think it is enough. I do believe I will be happy with it. It is NOT like buying gold, I know it has a life expectancy and one day that will be $0.01 USD.

Still, I will be happy for a bit ... as I said, you mileage may vary. I walked into this deal with my eyes wide open ...

Warm regards,
JS

## 212. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-24 23:09:25 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <nlidnTn__YA7hwTanZ2dnUVZ_rPinZ2d@bright.net>
Source record: 5649

Aviation band is AM :(

Scott
N0EDV

Edward Feustel wrote:
> On Wed, 23 Jan 2008 20:10:01 -0800 (PST), jblandrum@gmail.com wrote:
>
>
>>I'm curious about how I might modify say my Aviation Radio (my hand
>>held spare I keep in case of lost electric in an aircraft). To pick up
>>amateur bands as well as the Aviation bands.
>>
>>I'm not interested in the slightest as to whether or not this is
>>legal, I'm simply looking for educational purposes.
>>I wanted to get one and then I became curious ... as to how difficult
>>it would be or how it would be done, what kind of reading I would do
>>if I wanted to build/modify any radio etc.
>
>
> As I understand it, aviation radios use frequency modulation.
> If you are interested in the vhf or uhf amateur transmissions,
> then you can build a simple converter in which the portions of
> the bands you are interested can be converted to be presented
> in the aviation bands.
>
> Your best bets for dealing with other modulation modes such as cw and
> ssb is to either buy an older transceiver or shortwave receiver with
> beat frequency oscillator (or ssb reception). Alternatively you can
> get a receiver kit or build a simple regenerative receiver.
>
> In both cases, an investment in the ARRL's Amateur Radio Handbook
> is advisable. An edition after about 1990 (they are done yearly)
> would be appropriate.
> 73,
> Ed, N5EI

--
Scott
http://corbenflyer.tripod.com/
Gotta Fly or Gonna Die
Building RV-4 (Super Slow Build Version)

## 213. BIRD NOS COAXSWITCH: NOS: AVAILABLE

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-25 02:13:33 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <hBbmj.487215$kj1.282825@bgtnsc04-news.ops.worldnet.att.net>
Source record: 5650

A NOS COAXSWITCH SERIES #74 will be on Ebay soon at:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

Have seen used ones for $495! Mine will not be, hi : stay tuned, tnx
Heytubeguy

## 214. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-25 03:31:00 UTC
From: Bert <hcm1955@gmail.com>
Message-ID: <bcc0b121-a419-498b-8d9d-07d5fa0fef88@z17g2000hsg.googlegroups.com>
Source record: 5551

Many members are correct. I have never done anything like this, and
there is considerable danger in what I am considering. Why would I
want to try such a foolish thing?

The nature of the experiment is to test the feasibility of beaming
power to a Thermoacoustic Engine. The ultimate goal is to power a
climber to compete in the elevator2010 contest where first prize is 1
million bucks. Now I don't expect to power a 100 pound climber with
one 1000 watt magnetron. The oven magnetron was only to test the
concept. For the real thing one would need a Burle S95608E100

Elevator2010: http://www.spaceward.org/elevator2010-pb.html
Burle 100K Magnetron: http://www.burle.com/cgi-bin/byteserver.pl/pdf/s94608E100.pdf
Thermoacoustic Engine: http://www.io.com/%7Efrg/tac.htm

Cheers,
Bert

On Jan 22, 5:06 pm, hex...@blazenet.net (gudmundur) wrote:
> In article <9d1040ff-8a30-4443-8bc7-dc5991daf...@v67g2000hse.googlegroups.com>,
> hcm1...@gmail.com says...
>
>
>
> >Does anyone in the group know anything about magnetrons? I planning to
> >do some experiments in transmitting microwaves.
>
> >I would like to use standard magnetrons from a microwave oven and
> >believe I can beam further if operated at the same frequency and
> >with the outputs in phase. I have no idea on how to do this. Please
> >advise
>
> >Cheers,
> >Bert
>
>  Kind of a strange side note to the syncing issue,
> There are commercial microwave ovens that use 2 magnetrons.
> These ovens are usually in food courts of large business
> offices or factories. They are 220vac powered of course.
> Since a single mag oven produces power only on a small
> portion of one half of an a.c. line cycle they did a neat
> trick in the twin mag ovens and switched the line connections
> to one power transformer. (the ovens have two complete and
> separate h.v. supplies) So one mag makes power on the positive
> half of the line cycle and the other makes power on the

> negative half of the line cycle. Strangely enough I have
> run into several units having the same 'in phase' line
> connection (by accident or tampering I guess) and they
> still work fine. Both mags tightly coupled to the cavity
> producing power at the same time on the same half of the
> line cycle. Talk about injection locking!!! 2 mags looking
> right at each other, and I have not found their service
> life to be any shorter but they take longer to pop popcorn.
> Probably several reasons for that, but a differance you can
> see and measure with a watch. Just by switching the primary
> transformer leads back to the 'normal' out of phase condition
> popcorn gets done faster.

## 215. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-25 19:30:50 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <1aedbaee-c58a-4dee-b709-9d33b50230a3@p69g2000hsa.googlegroups.com>
Source record: 5552

On Jan 23, 8:10 pm, jbland...@gmail.com wrote:
> I'm curious about how I might modify say my Aviation Radio (my hand
> held spare I keep in case of lost electric in an aircraft). To pick up
> amateur bands as well as the Aviation bands.
>
> I'm not interested in the slightest as to whether or not this is
> legal, I'm simply looking for educational purposes.
> I wanted to get one and then I became curious ... as to how difficult
> it would be or how it would be done, what kind of reading I would do
> if I wanted to build/modify any radio etc.

The quick way is to build a converter to translate the 144-148 MHz
signals to the aircraft band.

Paul, KD7HB

## 216. FAI ATWATJER-KENT MOD #32 + STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-25 21:16:13 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <xksmj.166420$MJ6.160759@bgtnsc05-news.ops.worldnet.att.net>
Source record: 5553

A very nice AK #32 less tubes + Collins, Military TM's, Halli manuals can be see at:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

I have additional antique radios (about 20 or so) that need new homes as a possible move

is in the very near future. Larger units will require something like UPS Store to do packing

and shipping. Stop by and take a look. Heytubeguy

## 217. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-26 00:40:02 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <Cjvmj.2883$7d1.1542@news01.roc.ny>
Source record: 5554

pdrahn@coinet.com wrote:
> On Jan 23, 8:10 pm, jbland...@gmail.com wrote:
>
>> I'm curious about how I might modify say my Aviation Radio (my hand
>> held spare I keep in case of lost electric in an aircraft). To pick up
>> amateur bands as well as the Aviation bands.
>>
>> I'm not interested in the slightest as to whether or not this is
>> legal, I'm simply looking for educational purposes.
>> I wanted to get one and then I became curious ... as to how difficult
>> it would be or how it would be done, what kind of reading I would do
>> if I wanted to build/modify any radio etc.
>>
>
> The quick way is to build a converter to translate the 144-148 MHz
> signals to the aircraft band.
>
> Paul, KD7HB
>
>
You will find that most hams use FM and some hams use SSB and very few
hams use AM.
Your aircraft radio is AM.

Bill K7NOM

## 218. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-26 16:22:09 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13pmnh784d8gede@corp.supernews.com>
Source record: 5555

Bert wrote:
> Does anyone in the group know anything about magnetrons? I planning to
> do some experiments in transmitting microwaves.
>
> I would like to use standard magnetrons from a microwave oven and
> believe I can beam further if operated at the same frequency and
> with the outputs in phase. I have no idea on how to do this. Please
> advise

There seems to be quite a lot of material on the web for this topic
and I suspect some practical solutions. Also while perusing Usenet
archives on another topic I found this list from a french newsgroup
which may be useful if the links haven't succumbed to bit rot
(haven't checked them):

MAGNETRON
Beamed Microwave Power Transmission and its Application to Space -
http://engineer.tamu.edu/tees/csp/wireless/70dec5.htm
Book 11 - http://www.tpub.com/neets/book11/index.htm
Communications & Power Industries, Beverly, MA -
http://www.cpii.com/bmd/magoper1.htm
EA6VQ - Phase locking a microwave oven for EME use -
http://www.qsl.net/ea6vq/oven.html
High Power Converter of Microwaves into DC -
http://jre.cplire.ru/iso/sep99/1/text.html
How To Test The Magnetron Tube -
http://www.gallawa.com/microtech/mag_test.html
Ingolf's Web Presence Links across the net -
http://www.ee.sun.ac.za/ehg/imeier/links.html
MILAX Fuel-free Flight Experiment - http://www.kurasc.kyoto-
u.ac.jp/plasma-group/sps/milax-e.html
Publication IAF 97 - http://www.univ-reunion.fr/~lcks/PubIAF97.htm
Sps Emission - http://helios.univ-reunion.fr/~lcks/spsemiss.htm
W.C. Brown Biodata Page -
http://engineer.tamu.edu/tees/csp/wireless/brownbio.htm
Welcome to The Center for Space Power at Texas A&M University -
http://engineer.tamu.edu/tees/csp/

Regards,

Michael

## 219. Re: Syncing Up Multiple Magnetrons

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-26 23:50:28 UTC
From: Bert <hcm1955@gmail.com>
Message-ID: <6c1eb77b-10cc-49a2-9637-d60a207be230@s8g2000prg.googlegroups.com>
Source record: 5556

Michael,

Thank you very much for the info and links.

I am forming up a team to compete this year. If we don't compete this year we will enter next year. So far I have 3 people from work (Lockheed Martin) including myself,one from IEEE, and a person that has competed in previous elevator2010 contests(http://www.spaceward.org/elevator2010.html). If you know of anyone who is interested in joining our team (Especially if they know how to design High Power RF/Microwave Antennas, Dishes, and Horns) please shoot me an email at: hcm1955@gmail.com

Thanks,
Bert

>

> There seems to be quite a lot of material on the web for this topic
> and I suspect some practical solutions. Also while perusing Usenet
> archives on another topic I found this list from a french newsgroup
> which may be useful if the links haven't succumbed to bit rot
> (haven't checked them):
>
> MAGNETRON
> Beamed Microwave Power Transmission and its Application to Space
-http://engineer.tamu.edu/tees/csp/wireless/70dec5.htm
> Book 11 -http://www.tpub.com/neets/book11/index.htm
> Communications & Power Industries, Beverly, MA -http://www.cpii.com/bmd/magoper1.htm
> EA6VQ - Phase locking a microwave oven for EME use -http://www.qsl.net/ea6vq/oven.html
> High Power Converter of Microwaves into DC -http://jre.cplire.ru/iso/sep99/1/text.html
> How To Test The Magnetron Tube -http://www.gallawa.com/microtech/mag_test.html
> Ingolf's Web Presence Links across the net
-http://www.ee.sun.ac.za/ehg/imeier/links.html
> MILAX Fuel-free Flight Experiment -http://www.kurasc.kyoto-
> u.ac.jp/plasma-group/sps/milax-e.html
> Publication IAF 97 -http://www.univ-reunion.fr/~lcks/PubIAF97.htm
> Sps Emission -http://helios.univ-reunion.fr/~lcks/spsemiss.htm
> W.C. Brown Biodata Page -http://engineer.tamu.edu/tees/csp/wireless/brownbio.htm
> Welcome to The Center for Space Power at Texas A&M University
-http://engineer.tamu.edu/tees/csp/
>
> Regards,
>
> Michael

## 220. SolderSmoke 75 A Podcast About Electronics and Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-27 13:28:57 UTC
From: "bill.meara@gmail.com" <bill.meara@gmail.com>
Message-ID: <631fabb9-c0b5-4411-b995-3e56fbf8e4ac@l32g2000hse.googlegroups.com>
Source record: 5557
Cross-posted to: rec.radio.amateur.homebrew, rec.radio.amateur.boatanchors, sci.astro.amateur, sci.electronics.basics

SolderSmoke!
A SHOW FOR ELECTRONICS HOMEBREWERS!

http://www.soldersmoke.com

Listen at: http://www.soldersmoke.com

SolderSmoke #75
January 27, 2008
"A Nonlinear History of Radio."
Fessenden's mic.
Clustr Map.
BANDSWEEP: Lunar Echoes at 6.7 MHz.
Winter SPRAT.
HALO Balloon.
AO-16 Satellite goes DSB.
Calling CQ on Chinese repeaters.
-----------
MAILBAG: AA1TJ setting up Tunnel Diode beacon.
Kevin, M0KHZ builds in an 18th Century Shack.
Steve, G0FUW, listens from Ascension Island.
Lars, OZ1CX, has THE KNACK.
WA7MLH Builds a Superhet on YouTube.
Waza, VK2HDH, calls in on Echolink.
-----------
PART III: Andy, ZS6ADY, on Boatanchors in
South Africa.
-----------
A SPECIAL ENDING: A 1979 song by Mike, KL7R.

Tired of listening to Blondie or the CHU on your I-Pod? Wouldn't you
like to be able to carry with
you the kinds of ham radio conversations that you
listen to while in your radio shack? Tune in to SolderSmoke!

RSS FEED: You can subscribe to the program, have
them downloaded to your MP-3 player, and listen to
them at your convenience. To subscribe, just cut and
paste this URL into your I-poder (or similar)
software.
http://www.soldersmoke.com/soldersmoke.rss

If you don't have an MP3 player you can just go to the
site below and listen to the latest program (and
earlier editions) using the audio software on your

computer.

http://www.soldersmoke.com

All the programs are available here.

I hope you enjoy the program. Please send us feedback.

73 from Rome
Bill M0HBR N2CQR CU2JL
http://www.gadgeteer.us

## 221. Re: Good reading on radio modifications/building

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-27 15:18:39 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <mh1nj.39318$m6.31399@newsfe18.lga>
Source record: 5558

<jblandrum@gmail.com> wrote in message
news:3ab8579a-b03a-4234-8552-52ac8a990f86@l32g2000hse.googlegroups.com...
> I'm curious about how I might modify say my Aviation Radio (my hand
> held spare I keep in case of lost electric in an aircraft). To pick up
> amateur bands as well as the Aviation bands.
>

You'd be far better off looking at the wideband pocket scanners that are
now on the market. These cover from the broadcast band up into the
UHF regions and are multimode as well.

## 222. 144mhz Front-End with output at 10.7MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-27 19:14:06 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <6043g0F1p9qiiU1@mid.individual.net>
Source record: 5559

Anyone know of a 144Mhz front-end circuit with the output at 10.7Mhz?

Or a good 144Mhz front-end circuit that can be altered to output at 10.7Mhz?

I've got a complete homebrew RX, (PMR parts) but I do wonder if I could do
to change the front-end from xtal control to a tuneable front-end.

## 223. Power Supply for EB104

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-27 19:23:47 UTC
From: Holger Doerschel <newsgroups@pt100.net>
Message-ID: <604423F1oupe4U1@mid.individual.net>
Source record: 5560

Hello,

I build this (http://oh8jep.kotinet.com/eb104/pw_eb104.gif) power supply for the EB104-amplifier. Unfortunately I can't get BUX22 and so I used BUX98A.

The transformer-output is a little bit lower, so the DC is 62V. But the supply works and I get 50V output. So far so good.

My eb104 is still not assembled, so I tested the supply with two Osram halogen lamps HLX64655 250W and 24V in series connexion.

When the lamps are connected and the transformer is connected to the mains supply sometimes the lamps will light. The current ist ca. 11 ampere. But the current behind the rectifier is 21A!!! But the output voltage is still 50V.

Often the lamps will not light an the voltage drops down to zero.

If I try four lamps, a series of two parallel lamps, they never light.

When the lamps are not connected and I connect the power supply to the mains supply and after that I connect the lamps the voltage drops always down to zero.

So you see, a lot of problems.

Any hints?

Vy 73 Holger/ DL9HDA

## 224. Re: RCA Receiving Tube Manual download links

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-27 19:53:13 UTC
From: Ron H <rnharsh@nospam.net>
Message-ID: <479cdf3a$0$24816$8d2e0cab@news.newsgroup-binaries.com>
Source record: 5561
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.audio.tubes,rec.radio.amateur.equipment,rec.radio.amateur.misc

So who gets the money?

--

Ron H
--
This outgoing email was scanned by
Norton Antivirus Corp. Edition
and found to be virus free!

----------
www.Newsgroup-Binaries.com - *Completion*Retention*Speed*
Access your favorite newsgroups from home or on the road
----------

## 225. Re: Power Supply for EB104

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-27 20:03:29 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <ls5nj.4224$9j6.3593@attbi_s22>
Source record: 5562

> So you see, a lot of problems.
>
> Any hints?
>
>
> Vy 73 Holger/ DL9HDA
>
>
> Absolutely Holger. Use something besides light bulbs for a load. They
> probably want 500 Amperes when they're cold.

W4ZCB
>
>
>
>

## 226. Re: Power Supply for EB104

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-27 20:15:08 UTC
From: Holger Doerschel <newsgroups@pt100.net>
Message-ID: <60472cF1pfcv6U1@mid.individual.net>
Source record: 5563

Harold E. Johnson wrote:

>> Absolutely Holger. Use something besides light bulbs for a load. They
>> probably want 500 Amperes when they're cold.
> W4ZCB

Hello Harold, I hadn't previously considered this. My mistake. So I'll try
to find some suitable resistors ...

Holger / DL9HDA

## 227. Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-28 11:27:20 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <605sh6F1ppo43U1@mid.individual.net>
Source record: 5564

I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding 24V @ about 300mA.

Are switch-mode powers supplies alright or are they too noisy to be used for receivers? TIA.

## 228. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-28 15:41:02 UTC
From: Mike Andrews <mikea@mikea.ath.cx>
Message-ID: <fnkt2e$m53$5@puck.litech.org>
Source record: 5565

On Mon, 28 Jan 2008 11:27:20 -0000,
Richard <nearlynews_email@ntlworld.com> wrote in
<605sh6F1ppo43U1@mid.individual.net>:

> I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> 24V @ about 300mA.

> Are switch-mode powers supplies alright or are they too noisy to be used for
> receivers? TIA.

Some switchers are very good, some aren't very good at all. One friend
has the Icom PS-120 (I think) for his Icom transceiver, and finds it
to be so noisy as to be unusable .Other friends have other switchers
and find them to be OK, and a third group find them somewhat noisy,
but tolerable if you don't mind tuning around the birdies.

I use a Samlex 30-Amp switcher to drive my Yaesu FT-897D in the shack,
and it's just fine above 500 KHz or so. It *does* put out some hash in
the 20-500 KHz region; my SDR-IQ receiver's waterfall display shows it
quite plainly.

You may find a linear-mode supply (xfmr; half-wave, full-wave, or
bridge rectifier; filter) to be better for your use; I don't know of
a lot of 24V switchers. Certainly a linear supply will be quieter if
done well, as the only noise will be from ripple that gets through the
filters, and the tiny bit of hash from the rectifier junctions turning
on and off.

--
I had the largest, strongest tornado ever recorded march by just four
miles away in May of '99, I could feel the house breathing from the
subsonic pressure wave. It's a Live Thing, like Fire.
-- Charly the Bastard, in rec.org.sca

## 229. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-28 15:50:33 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfprue8.2kam.bit-bucket@shell.config.com>
Source record: 5566

On Mon, 28 Jan 2008 11:27:20 -0000, Richard wrote:
> I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU
> feeding 24V @ about 300mA.

You are almost talking about a wall-wart there, aren't you?
Or, possibly, a desktop 'brick' PS.

> Are switch-mode powers supplies alright or are they too noisy to be
> used for receivers? TIA.

Just make sure the PS is enclosed. And, use ferrite beads/doughnuts on
_all_ input\output wiring. And, it wouldn't hurt to put .001 uF bypass
capacitors on that wiring, too, betwix the ferrites and the PS.

My venerable IC-551's (6M) internal power supply went kah-kah and I
replaced it with a switched-mode PS from Marlin P Jones:

http://www.mpja.com/

That was some time ago, but what I bought was similar to:

http://www.mpja.com/prodinfo.asp?number=16001+PS

My original requirement was _size_. I wanted to stuff the new PS into
the same cavity in the IC-551 where the old PS came out. So, having
installed the new switched-mode PS _inside_ the rig -- with all the
install 'details' I listed above -- I saw no appreciable rise in the
no-antenna-connected noise floor.

Plus I could 'tweak' the output voltage -- setting it at 13V -- and "amp
up" that IC-551 to a blistering 11W or so. HI!HI!

I encouraged a feller in Kansas to do likewise with his IC-251 (2M) that
had a dead PS, and he reported similar success.

Of course, YMMV
gl es 73
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

## 230. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-28 16:54:32 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <p32sp390uqa7a92j0dks56jbe83fnbccns@4ax.com>
Source record: 5567

On Mon, 28 Jan 2008 11:27:20 -0000, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
>24V @ about 300mA.
>
>Are switch-mode powers supplies alright or are they too noisy to be used for
>receivers? TIA.
Some are, some are not. You have a lot of choices available at 300ma.

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

## 231. Intermittent raspy signals on ICOM 735 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-28 17:15:24 UTC
From: Larry Gagnon <lggagnon@fakeuniserve.com>
Message-ID: <op.t5ngvy2paiss39@localhost>
Source record: 5568

I have a problem with my ICOM 735 transceiver. It has done me well for 23 years now, but just recently I have noticed raspy CW and SSB signals on receive, on an intermittent basis. This problem comes and goes, often in long intervals and does not seem to be affected by temperature. It sounds simply like an unclean signal with a raspy note on top of it. I am so far unable to determine if this affects my transmit signal or not, I did get a poor report once during this condition, but during another transmission at another time I did not. I have the complete service manual for this rig, but am a bit unsure where to start.

Any ideas appreciated.

Larry VE7EA

## 232. Re: Intermittent raspy signals on ICOM 735 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-28 18:32:17 UTC
From: dl8fbh@dl8fbh.ampr.org
Message-ID: <fnl73h$uml$1@dl8fbh.ampr.org>
Source record: 5569

Larry Gagnon <lggagnon@fakeuniserve.com> wrote:

> I have a problem with my ICOM 735 transceiver. It has done me well for 23
> years now, but just recently I have noticed raspy CW and SSB signals on
> receive, on an intermittent basis. This problem comes and goes, often in
> long intervals and does not seem to be affected by temperature. It sounds
> simply like an unclean signal with a raspy note on top of it. I am so far
> unable to determine if this affects my transmit signal or not, I did get a
> poor report once during this condition, but during another transmission at
> another time I did not. I have the complete service manual for this rig,
> but am a bit unsure where to start.
>
> Any ideas appreciated.

Probably you have to replace plastic trimmer capacitors C37, C45, C52, C59 and C138.
Go to www.icomamerica.com/en/support/default.aspx

Mike

## 233. Power Supply for EB104

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-29 01:02:45 UTC
From: Michael <michael78759@yahoo.com>
Message-ID: <Xns9A33C18AB66A9mpendley2austinrrcom@66.250.146.128>
Source record: 5570

>

Most Lamps have a starting current (cold filament) of 7 to 10 times the
running (hot filament) current. You need to use resistors to test the power
supply.

Michael

## 234. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-29 02:04:25 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <bb4e67c2-e6d2-4a53-8d13-6349413d0e9b@c4g2000hsg.googlegroups.com>
Source record: 5571

On Jan 28, 3:27 am, "Richard" <nearlynews_em...@ntlworld.com> wrote:
> I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> 24V @ about 300mA.
>
> Are switch-mode powers supplies alright or are they too noisy to be used for
> receivers? TIA.

The receiver I'm building uses switchers internally to take 5V down to various other voltages. Total power supplied by the switchers is around 20 watts. They're little open modules. I can "see" the fundamentals (200kHz-700kHz range for these supplies) and the first few harmonics if I go looking for them, but they're certainly not an issue at 144MHz. With enough shielding and bypassing (done right), I suppose any switcher would be clean enough. With a switcher of good design, you won't even need any additional shielding or bypassing.

Cheers,
Tom

## 235. Re: Intermittent raspy signals on ICOM 735 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-29 06:55:31 UTC
From: Larry Gagnon <lggagnon@fakeuniserve.com>
Message-ID: <op.t5oiutvkaiss39@localhost>
Source record: 5572

On Mon, 28 Jan 2008 10:32:17 -0800, <dl8fbh@dl8fbh.ampr.org> wrote:

> Probably you have to replace plastic trimmer capacitors C37, C45, C52,
> C59 and C138.
> Go to www.icomamerica.com/en/support/default.aspx
>
>
> Mike
>

Thanks Mike!!

## 236. Mercer Electronics Tuning and Level Indicators, &c.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-29 16:25:21 UTC
From: Mike Andrews <mikea@mikea.ath.cx>
Message-ID: <fnnk1h$cg2$1@puck.litech.org>
Source record: 5573

I came into a large hatful of indicators made by Mercer Electronics, a division of Simpson Electric.

These are small (under 2" overall width, mount in a 1.425 x 0.8 " rectangular hole, and have a meter-style movement driving a cylinder mounted with axis parallel to the front of the device, rather like a roll of paper towels. Current drives the cylinder, and a DayGlo red-orange flag printed on the cylinder changes position. I have three varieties:

Zero Indicator Cat. # 11338 model 510, 50-0-50 microamps, zero center
The cylinder has two opposing solid-color arrowheads, which are in the center of the viewing area when no current is applied.

Tuning Meter Cat # 11220 model 510, 0-100 microamps
The cylinder has a single triangular colored area, such that increasing current increases the red area displayed through the window (leading edge of the triangle moves to the right, like the speedometer in our old Pontiac).

Another variety not with me here at work, with 20-10-0 marks along the top edge of the viewing area and 0-10-20 marks along the bottom edge/
It appeared to be zero-center, and used for tuning or something.

Anyone know anything about these?

--
A computer scientist is someone who, when told to "Go to hell," sees the "go to," rather than the destination, as harmful.
-- Dr. Roger M. Firestone

## 237. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-30 12:57:54 UTC
From: jack <jdwalton@comcast.net>
Message-ID: <ntqdnbNV7aMn7j3anZ2dnUVZ_tWtnZ2d@comcast.com>
Source record: 5574

You can tweak up the power on a 24VDC switcher to cover the headroom for a linear regulator following the switcher. This is an old technique - and still used. My preference would be an adjustable regulator with the adjust pin bypassed with 10uF. Linear Technologies has some regulator chips that out of the box have noise lower than garden variety LM317/337.

You may have to shield the supply --

## 238. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-30 18:13:08 UTC
From: jimmie68@gmail.com
Message-ID: <2040d0cd-bd5a-4a0f-9e84-843ec9657e83@s12g2000prg.googlegroups.com>
Source record: 5575

John Ferrell wrote:
> On Mon, 28 Jan 2008 11:27:20 -0000, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> >I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> >24V @ about 300mA.
> >
> >Are switch-mode powers supplies alright or are they too noisy to be used for
> >receivers? TIA.
> Some are, some are not. You have a lot of choices available at 300ma.
>
> John Ferrell W8CCW
> "Life is easier if you learn to
> plow around the stumps"

I tried one that created all kinds of interference. I was able to
solve the problem by installing caps in parallel with the rectifiers, .
005uF disc I think.

Jimmie

## 239. Re: 6146 data

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-30 22:40:42 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <47a0fcd9$1@clear.net.nz>
Source record: 5576

Harold E. Johnson wrote:
> "Jimmie D" <GFENDER@carolina.rr.com> wrote in message
> news:4796a402$0$22578$4c368faf@roadrunner.com...
>
>>I am trying to build a class AB linear amp usig a 6146, plate voltage will
>>be about 600 volts. What's the peak drive voltage for this configuration.
>>
>>Jimmie
>
> About one Volt less than the DC bias on the grid.
>
> W4ZCB
>
>
>
Hi Jimmy.
Harold is just about right for class AB1. You can get a bit more out in
AB2 with a small grid current but I don't reccomend it. Remember to keep
your cathode leads short and well bypassed.
The best way is to have a grid current meter and NOT to run the stage
into grid current.
The 6146 especially the B type can be a bit unstable otherwise. I
found that my old Kenwood 820S doesn't like them in the final. The
original Japanese S2001's though apparently similar to the 6146B work
much better.
73's Cliff Wright ZL1BDA

## 240. Re: 3 tube am 75 meter mobile

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-31 01:32:38 UTC
From: gradyw@elite.net
Message-ID: <34bef58c-549c-4a01-920b-1dbad0f303fa@q39g2000hsf.googlegroups.com>
Source record: 5577

On Dec 9 2007, 7:15 am, "W7CXA" <w7...@arrl.net> wrote:
> I am looking for information on a 3 tube 75 meter am transmitter that was
> around about 1958. Two of the tubes were 6146, one for modulator and one
> for final. I cant remember what the oscillator was.
>
> J. Andy Thompson
> W7CXA
> Yakima, WA
> ay...@charter.net

Back in the 50's there was a very popular TWO tube mobile transmitter used by several mobile operators on 3995... Developed by Bob Carter, W6NTU who lived up on the side of Mt. Hamilton near San Jose... It used a12AT7 driving a sweep tube... Several of the fellows in addition to a variant of sweep tubes, used a 6146 and an occasional 2E26 in the final as well depending on available plate voltage... Half of the 12AT7 was the Oscillator, the other half was modulator... Carter Modulation transmitters were very popular due to their simplicity and performance. When loaded a bit on the heavy side, the audio sounded quite good... Go to:

http://www.geocities.com/ResearchTriangle/Lab/4513/carter.html

For a bit of History and a schematic of the transmitter... Remember load that lil sucker fairly heavy with very little perceptible plate dip for best audio results...

Good Luck de Grady K6IXA

## 241. Re: Power Supply for EB104

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-01-31 16:51:05 UTC
From: jimmie68@gmail.com
Message-ID: <5ae81d63-eff1-4c44-8f24-aa327880535e@i29g2000prf.googlegroups.com>
Source record: 5578

Holger Doerschel wrote:
> Hello,
>
> I build this (http://oh8jep.kotinet.com/eb104/pw_eb104.gif) power supply for
> the EB104-amplifier. Unfortunately I can't get BUX22 and so I used BUX98A.
>
> The transformer-output is a little bit lower, so the DC is 62V. But the
> supply works and I get 50V output. So far so good.
>
> My eb104 is still not assembled, so I tested the supply with two Osram
> halogen lamps HLX64655 250W and 24V in series connexion.
>
> When the lamps are connected and the transformer is connected to the
> mains supply sometimes the lamps will light. The current ist ca. 11
> ampere. But the current behind the rectifier is 21A!!! But the output
> voltage is still 50V.
>
> Often the lamps will not light an the voltage drops down to zero.

Seems like i read somewhere the EB104 didnt work best at 50 volts, I
believe it was 41 volts, maybe lower.

Howard probably knows about this.

Jimmie
>
> If I try four lamps, a series of two parallel lamps, they never light.
>
> When the lamps are not connected and I connect the power supply to the
> mains supply and after that I connect the lamps the voltage drops always
> down to zero.
>
>
> So you see, a lot of problems.
>
> Any hints?
>
>
> Vy 73 Holger/ DL9HDA

## 242. desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-02 14:46:59 UTC
From: David Rowell <djrpublic@cfl.rr.com>
Message-ID: <47a48266$0$6156$4c368faf@roadrunner.com>
Source record: 5579

Would you nice folks point me to a good how-to on desoldering?

## 243. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-02 15:50:17 UTC
From: The Shadow <Cranston@CobaltClub.com>
Message-ID: <0j0pj.92436$Rf5.25539@newsfe13.phx>
Source record: 5580

"David Rowell" <djrpublic@cfl.rr.com> wrote in message
news:47a48266$0$6156$4c368faf@roadrunner.com...
> Would you nice folks point me to a good how-to on desoldering?

Try these URL's

http://www.epemag.wimborne.co.uk/solderfaq.htm

http://www.qsl.net/iz7ath/web/02_brew/14_howto/04_rec/index.htm

I use these

The usual way is to use a desoldering pump or vacuum pump which works like a small spring-loaded bicycle pump, only in reverse!

An excellent alternative to a pump is to use desoldering braid, including the famous American "Soder-Wick" (sic) or Adcola "TISA-Wick" which are packaged in small dispenser reels.

Lamont

## 244. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-02 16:29:50 UTC
From: The Shadow <Cranston@CobaltClub.com>
Message-ID: <4U0pj.45352$Gr4.29806@newsfe08.phx>
Source record: 5581

"The Shadow" <Cranston@CobaltClub.com> wrote in message
news:0j0pj.92436$Rf5.25539@newsfe13.phx...
>
> "David Rowell" <djrpublic@cfl.rr.com> wrote in message
> news:47a48266$0$6156$4c368faf@roadrunner.com...
>> Would you nice folks point me to a good how-to on desoldering?
>
> Try these URL's
>
> http://www.epemag.wimborne.co.uk/solderfaq.htm
>
> http://www.qsl.net/iz7ath/web/02_brew/14_howto/04_rec/index.htm
>
> I use these
>
> The usual way is to use a desoldering pump or vacuum pump which works like
> a small spring-loaded bicycle pump, only in reverse!
>
> An excellent alternative to a pump is to use desoldering braid, including
> the famous American "Soder-Wick" (sic) or Adcola "TISA-Wick" which are
> packaged in small dispenser reels.
>
> Lamont

Solder-Wik
http://www.wassco.com/80seresdblub1.html

Desoldering pumps
http://www.action-electronics.com/desolder.htm

Lamont

## 245. Re: Power Supply for EB104

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-02 20:40:40 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <dz4pj.16742$1f.6260@bignews9.bellsouth.net>
Source record: 5582

jimmie68@gmail.com wrote:
>
> Holger Doerschel wrote:
>> Hello,
>>
>> I build this (http://oh8jep.kotinet.com/eb104/pw_eb104.gif) power supply for
>> the EB104-amplifier. Unfortunately I can't get BUX22 and so I used BUX98A.
>>
>> The transformer-output is a little bit lower, so the DC is 62V. But the
>> supply works and I get 50V output. So far so good.
>>
>> My eb104 is still not assembled, so I tested the supply with two Osram
>> halogen lamps HLX64655 250W and 24V in series connexion.
>>
>> When the lamps are connected and the transformer is connected to the
>> mains supply sometimes the lamps will light. The current ist ca. 11
>> ampere. But the current behind the rectifier is 21A!!! But the output
>> voltage is still 50V.
>>
>> Often the lamps will not light an the voltage drops down to zero.
>
>
> Seems like i read somewhere the EB104 didnt work best at 50 volts, I
> believe it was 41 volts, maybe lower.
>
> Howard probably knows about this.
>
>
I assume that this means 41 volts gives the best IMD figure, not the
lowest drive or highest power output. Maybe this is also a safe
operating point with higher voltages requiring much more in the way of a
heat sink or fan for safe operation without having to reduce the zero
signal current to the point of more cross over distortion.

## 246. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-03 16:35:58 UTC
From: David Rowell <djrpublic@cfl.rr.com>
Message-ID: <47a5ed70$0$17364$4c368faf@roadrunner.com>
Source record: 5583

The Shadow wrote:
>
> "David Rowell" <djrpublic@cfl.rr.com> wrote in message
> news:47a48266$0$6156$4c368faf@roadrunner.com...
>> Would you nice folks point me to a good how-to on desoldering?
>
> Try these URL's
>
> http://www.epemag.wimborne.co.uk/solderfaq.htm
>
> http://www.qsl.net/iz7ath/web/02_brew/14_howto/04_rec/index.htm
>
> I use these
>
> The usual way is to use a desoldering pump or vacuum pump which works
> like a small spring-loaded bicycle pump, only in reverse!
>
> An excellent alternative to a pump is to use desoldering braid,
> including the famous American "Soder-Wick" (sic) or Adcola "TISA-Wick"
> which are packaged in small dispenser reels.
>
> Lamont

I've been using braid as I haven't had good results with the solder
sucker devices. I was hoping that some magic secret would come forth!

Man that guy with the second link must have some junk box!

Many thanks for the reply.

Dave Rowell - KI4JVU

## 247. need QST article - Tandem Match follow-up

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-03 16:41:01 UTC
From: "Joe L." <joe@falseaddress2004.net>
Message-ID: <joe-A91BEC.10410103022008@comcast.dca.giganews.com>
Source record: 5584

Hello. Am looking for a copy of the "Technical Correspondence" column from July 1993 QST. The local library only keeps the most recent 5 years of the print issue. Could anyone please send me a PDF? It is follow-up correspondence to KI6WX's article on the Tandem Match power/SWR meter from January 1987 QST. I'm interested in building up just the forward power detector for the home workbench.

Please send to K9LY at placeholder dot net , but use comcast instead of the obviously fake domain name. ;-)

Tnx & 73,
Joe K9LY

## 248. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-03 19:43:58 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <804d2cc1-fc33-483b-b833-5b37921b2149@e6g2000prf.googlegroups.com>
Source record: 5585

On Feb 3, 8:35 am, David Rowell <djrpub...@cfl.rr.com> wrote:
> The Shadow wrote:
>
> > "David Rowell" <djrpub...@cfl.rr.com> wrote in message
> >news:47a48266$0$6156$4c368faf@roadrunner.com...
> >> Would you nice folks point me to a good how-to on desoldering?
>
> > Try these URL's
>
> >http://www.epemag.wimborne.co.uk/solderfaq.htm
>
> >http://www.qsl.net/iz7ath/web/02_brew/14_howto/04_rec/index.htm
>
> > I use these
>
> > The usual way is to use a desoldering pump or vacuum pump which works
> > like a small spring-loaded bicycle pump, only in reverse!
>
> > An excellent alternative to a pump is to use desoldering braid,
> > including the famous American "Soder-Wick" (sic) or Adcola "TISA-Wick"
> > which are packaged in small dispenser reels.
>
> > Lamont
>
> I've been using braid as I haven't had good results with the solder
> sucker devices. I was hoping that some magic secret would come forth!
>
> Man that guy with the second link must have some junk box!
>
> Many thanks for the reply.
>
> Dave Rowell - KI4JVU

Hi, Dave.
Solder suckers are mainly for clearing holes in circuit boards using through-hole components. Braid is used for clearing solder from circuit board pads, either through-hole or surface mount.

I own a small electronic assembly service and my people generally begin a circuit board clean up by applying appropriate flux to the solder, then heating with a hot iron applied to solder-wick. Sometime the addition of a small amount of additional solder will help get the job started.

This procedure works for both lead solder and lead-free solder. Just use the appropriate flux and solder-wick. Lead-free needs a very aggressive flux and a really hot iron, so ventilation is imperative!

73's
Paul, KD7HB

## 249. Re: 6146 data

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-03 20:00:28 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <47a61d5a$0$30718$4c368faf@roadrunner.com>
Source record: 5586

"cliff wright" <c.c.wright@paradise.net.nz> wrote in message
news:47a0fcd9$1@clear.net.nz...
> Harold E. Johnson wrote:
>> "Jimmie D" <GFENDER@carolina.rr.com> wrote in message
>> news:4796a402$0$22578$4c368faf@roadrunner.com...
>>
>>>I am trying to build a class AB linear amp usig a 6146, plate voltage
>>>will be about 600 volts. What's the peak drive voltage for this
>>>configuration.
>>>
>>>Jimmie
>>
>> About one Volt less than the DC bias on the grid.
>>
>> W4ZCB
>>
>>
>>
> Hi Jimmy.
> Harold is just about right for class AB1. You can get a bit more out in
> AB2 with a small grid current but I don't reccomend it. Remember to keep
> your cathode leads short and well bypassed.
> The best way is to have a grid current meter and NOT to run the stage
> into grid current.
> The 6146 especially the B type can be a bit unstable otherwise. I found
> that my old Kenwood 820S doesn't like them in the final. The original
> Japanese S2001's though apparently similar to the 6146B work much better.
> 73's Cliff Wright ZL1BDA

THats what I thought too but I wasnt getting the plate current I should be getting. I figured I may have a design poblem since this was a new amp still in the design stage. A few math errors on my part muddied the waters even more. At first I calculated my drive voltage from my transceiver very close to 45 volts, my bias voltage. Then I recalculated it again once I started having problems but this time got 36 volts. Well, 45 was correct but I wasnt getting that much, more like 35. The problem wasnt a design flaw though. It was just a cockpit error on my part. I was running my transceiver off of 12 volts instead of 13.5. This made quite a bit of difference in my output.

Now to get this ugly saftey hazard put together so I can use it without risking family and pets.

Jimmie

## 250. Re: need QST article - Tandem Match follow-up

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-03 21:14:41 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13qcbleklmq45e6@corp.supernews.com>
Source record: 5587

Joe L. wrote:

> Hello. Am looking for a copy of the "Technical Correspondence" column
> from July 1993 QST.
<snip>

Check your email

Michael

## 251. Re: need QST article - RECEIVED

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 01:14:14 UTC
From: "Joe L." <joe@falseaddress2004.net>
Message-ID: <joe-C5EC3F.19141403022008@comcast.dca.giganews.com>
Source record: 5588

Article has been received. Thank you!

Joe K9LY

## 252. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 08:28:20 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <s1G1YbIkyspHFAYf@ifwtech.co.uk>
Source record: 5589

David Rowell wrote:
>The Shadow wrote:
>> "David Rowell" <djrpublic@cfl.rr.com> wrote in message
>>news:47a48266$0$6156$4c368faf@roadrunner.com...
>>> Would you nice folks point me to a good how-to on desoldering?
>> Try these URL's
>> http://www.epemag.wimborne.co.uk/solderfaq.htm
>> http://www.qsl.net/iz7ath/web/02_brew/14_howto/04_rec/index.htm
>> I use these
>> The usual way is to use a desoldering pump or vacuum pump which
>>works like a small spring-loaded bicycle pump, only in reverse!
>> An excellent alternative to a pump is to use desoldering braid,
>>including the famous American "Soder-Wick" (sic) or Adcola "TISA-Wick"
>>which are packaged in small dispenser reels.
>> Lamont
>
>I've been using braid as I haven't had good results with the solder
>sucker devices. I was hoping that some magic secret would come forth!
>
The only secret I know is that you need to have ALL of those desoldering techniques available. DON'T have a favorite technique, but always pick the best one for each individual solder joint.

The most important question is: which do you value the most - the parts that you're trying to desolder, or the board itself? That radically changes the range of techniques you might wish to use.

If you're stripping a board for parts, then the heat gun method works quite well for large IC packages. It doesn't matter if you cook the board because it has no value to you.

But when you are replacing a defective device to repair a board, it's completely the other way around. Now you have to protect the board and all the other good parts, and it's perfectly OK to destroy the defective device to do that.

For example, one of the best ways to protect the solder pads and plated-though holes is to cut through all the pins of the device first, using very sharp-pointed cutters or an X-acto knife. Throw away the body of the package, and then you can desolder the remaining 'stubs' one by one, with much less risk to the board.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

## 253. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 11:03:42 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <d354c29a-4d18-4390-b178-7045b5fee34f@j78g2000hsd.googlegroups.com>
Source record: 5590

On Jan 28, 10:27 pm, "Richard" <nearlynews_em...@ntlworld.com> wrote:
> I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> 24V @ about 300mA.
>
> Are switch-mode powers supplies alright or are they too noisy to be used for
> receivers? TIA.

Their noisy period, but you might get away with it on 2m. But you will
still be QRM'ing everyone else...
Hold AM transistor radio next to it, have a listen as you tune across
the band....not nice, lots of spurs with rich harmonic content...

Its your choice. The dark path or the light path of Radio Karma....

Andrew VK3BFA.

## 254. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 11:13:27 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <b69a69ed-936c-4168-99ea-8e250ab99649@l32g2000hse.googlegroups.com>
Source record: 5591

On 28 Jan, 11:27, "Richard" <nearlynews_em...@ntlworld.com> wrote:
> I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> 24V @ about 300mA.
>
> Are switch-mode powers supplies alright or are they too noisy to be used for
> receivers? TIA.

I use a 12V switcher with my FT-817D, it's very quiet.

Leon

## 255. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 11:55:08 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <6288d317-b248-4c08-a697-ebe2ce067bb7@q21g2000hsa.googlegroups.com>
Source record: 5592

On Feb 4, 10:13 pm, Leon <leon...@btinternet.com> wrote:
> On 28 Jan, 11:27, "Richard" <nearlynews_em...@ntlworld.com> wrote:
>
> > I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> > 24V @ about 300mA.
>
> > Are switch-mode powers supplies alright or are they too noisy to be used for
> > receivers? TIA.
>
> I use a 12V switcher with my FT-817D, it's very quiet.
>
> Leon

You were lucky - you got a quiet one. And its the luck of the draw,
unfortunately.

How come we have all been conned into these switchmode things? - by
their very nature, without a lot of effort, they are noise generators.
Their cheap to make, thats their only advantage - everything else is
part of the spin cycle. And if it works on 2m and above, fine - you
will just be adding to the already horrendous RF pollution from
thousands of the bloody things already on HF - the suburbs are getting
unbearable, S9 plus noise, every night, on 80m.....160 aint to crash
hot either...

I refuse to have to work on a power supply to get it quiet enough to
be used with a radio. I am interested in the radio, not fixing
shortcomings in design of things that , by their very nature, are
unsuitable to be used near radios. That sucks. Linear technology is
far easier and quieter...

Andrew VK3BFA.

## 256. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 16:52:41 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <3870e4fc-5baa-4229-83fc-3f430876490f@c4g2000hsg.googlegroups.com>
Source record: 5593

On Feb 4, 3:55 am, Andrew VK3BFA <vk3...@hotmail.com> wrote:
> On Feb 4, 10:13 pm, Leon <leon...@btinternet.com> wrote:
>
> > On 28 Jan, 11:27, "Richard" <nearlynews_em...@ntlworld.com> wrote:
>
> > > I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> > > 24V @ about 300mA.
>
> > > Are switch-mode powers supplies alright or are they too noisy to be used for
> > > receivers? TIA.
>
> > I use a 12V switcher with my FT-817D, it's very quiet.
>
> > Leon
>
> You were lucky - you got a quiet one. And its the luck of the draw,
> unfortunately.
>
> How come we have all been conned into these switchmode things? - by
> their very nature, without a lot of effort, they are noise generators.
> Their cheap to make, thats their only advantage - everything else is
> part of the spin cycle. And if it works on 2m and above, fine - you
> will just be adding to the already horrendous RF pollution from
> thousands of the bloody things already on HF - the suburbs are getting
> unbearable, S9 plus noise, every night, on 80m.....160 aint to crash
> hot either...
>
> I refuse to have to work on a power supply to get it quiet enough to
> be used with a radio. I am interested in the radio, not fixing
> shortcomings in design of things that , by their very nature, are
> unsuitable to be used near radios. That sucks. Linear technology is
> far easier and quieter...
>
> Andrew VK3BFA.

There's another advantage of a switching supply that is very important
to some of us: efficiency. The receiver I've been working on runs
from 5VDC, but I have to supply power at 1.0V, 1.2V 1.8V, 2.5V and
3.3V, and each one of those uses a switcher. A linear regulator to 1V
from 5V will result in a supply that's 20% efficient. The switcher
I'm using for that supply is about 87% efficient under its operating
conditions. If I tried to run all my supplies with linear regulators,
I'd have to supply over twice the power; it would come close to
violating the power rating of the 5V supply, and power dissipation in

the receiver would result in excessive heat rise.

But even with all those switchers, the only spurs greater than about -145dBm (antenna-input-referred) and greater than 1.5MHz are from digital circuits, not the power supplies. -145dBm is, I believe, 20dB _below_ S1 by usual definition of the S-meter units. Even the power supply fundamentals are only at about S1. And the supplies are not themselves shielded. (The receiver RF circuitry is, of course, as is the whole receiver module.)

I would be much more circumspect about using a switching supply in a homebrew receiver that was going to be used where power dissipation wasn't an issue, but then I'd do a lot of things differently than I have for such a receiver. It wouldn't keep me from using switchers; I'd just look at the whole design in a different way. On the other hand, finding ones that would be adequately quiet for a 144MHz receiver should not be difficult at all.

Cheers,
Tom

## 257. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 17:32:00 UTC
From: Clint Sharp <clint@clintsmc.demon.co.uk>
Message-ID: <PhYbcJFQw0pHFwt+@clintsmc.demon.co.uk>
Source record: 5594

In message <47a5ed70$0$17364$4c368faf@roadrunner.com>, David Rowell <djrpublic@cfl.rr.com> writes
>I've been using braid as I haven't had good results with the solder >sucker devices. I was hoping that some magic secret would come forth!
I've used solder suckers for over 25 years now (man that makes me feel old) You need top make sure that the sucker has a good seal on the plunger, if you block the tip with your finger it should stop the plunger if you hit the trigger.

Another essential tip is to make sure you have enough solder on the joint, it's often difficult to remove existing solder if you don't add some more, don't worry unduly about leaving solder behind, you can clean that up later with either wick or the sucker.

Make sure the joint is molten, get a good iron with a high heat capacity, I.E. one that maintains it's temperature when you put the tip on a cold lump of solder. I use a Weller W60D for almost everything (including reworking TSOP chips! Bet you can't tell it's been worked after I've removed the flux either.) with, IRC, a CT7 tip . Once the joint is molten try to move the pin in the hole, if it doesn't move then most likely the joint isn't molten, it's unusual for a pin to be a tight fit in a hole. Pre-heating a board can help immensely with 'difficult' boards

If you get all the above right, once you get the 'knack' you'll be able to desolder leaded components from multi-layer boards with internal ground and power planes with ease without damaging either chip or board.
>
>
>Dave Rowell - KI4JVU

--
Clint Sharp

## 258. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 18:43:37 UTC
From: Nelson <nelsonogden+usenet@gmail.com>
Message-ID: <n1Jpj.10512$EZ3.4791@nlpi070.nbdc.sbc.com>
Source record: 5595

>The only secret I know is that you need to have ALL of those desoldering
>techniques available. DON'T have a favorite technique, but always pick
>the best one for each individual solder joint.
>
>The most important question is: which do you value the most - the parts
>that you're trying to desolder, or the board itself? That radically
>changes the range of techniques you might wish to use.
>
>If you're stripping a board for parts, then the heat gun method works
>quite well for large IC packages. It doesn't matter if you cook the
>board because it has no value to you.
>
>But when you are replacing a defective device to repair a board, it's
>completely the other way around. Now you have to protect the board and
>all the other good parts, and it's perfectly OK to destroy the defective
>device to do that.
>
>For example, one of the best ways to protect the solder pads and
>plated-though holes is to cut through all the pins of the device first,
>using very sharp-pointed cutters or an X-acto knife. Throw away the body
>of the package, and then you can desolder the remaining 'stubs' one by
>one, with much less risk to the board.
>
>
>--
>
>73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
>http://www.ifwtech.co.uk/g3sek

Is there a good way to salvage good IC's from a junk board without a heat gun? I've tried solder wick but I always seem to spend so much time with desoldering each pin that I cook the IC, even if I can remove it.

Thanks, Nelson

## 259. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 19:59:57 UTC
From: David Rowell <djrpublic@cfl.rr.com>
Message-ID: <47a76ec0$0$4965$4c368faf@roadrunner.com>
Source record: 5596

David Rowell wrote:
> Would you nice folks point me to a good how-to on desoldering?

You guys are great! Thanks for the tips, I think I've learned something today.

I guess that my major hang-up has been getting the hole clean after I've chopped up the component and removed the leads from the board. Why didn't I think of using a solder sucker there?????

Dave Rowell

## 260. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 21:49:31 UTC
From: Mike Andrews <mikea@mikea.ath.cx>
Message-ID: <fo819b$8f3$1@puck.litech.org>
Source record: 5597

On Mon, 4 Feb 2008 13:43:37 -0500,
Nelson <nelsonogden+usenet@gmail.com> wrote in
<n1Jpj.10512$EZ3.4791@nlpi070.nbdc.sbc.com>:

> Is there a good way to salvage good IC's from a junk board without a
> heat gun? I've tried solder wick but I always seem to spend so much
> time with desoldering each pin that I cook the IC, even if I can
> remove it.

A toaster oven works great for getting surface-mount stuff off, or
(if you've put solder paste on the pads) for soldering SMD stuff.

--
"It takes a million monkeys at typewriters to write Shakespeare, but
only a dozen monkeys at computers to run Network Solutions."
-- Patrick Delahanty

## 261. WebPage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-04 23:37:02 UTC
From: KF4DNA <kf4dna@kf4dna.net>
Message-ID: <vkNpj.65980$vt2.40911@bignews8.bellsouth.net>
Source record: 5598

This webpage is dedicated to Everything that can be called EXTREME !

Skydiving, Storm Chasing, Rocketry, WebPage Resources and Amateur Radio

There is also a huge collection of resources for webpage development and promotion.

http://www.kf4dna.net

## 262. spiderbeam antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-05 17:54:35 UTC
From: jawod <jawod@fuse.net>
Message-ID: <9f8bd$47a8a44b$d066b697$23287@FUSE.NET>
Source record: 5599

I tried to post on the antenna group but most of the conversation over
there seems to remain on a rather esoteric (and pedantic) plan.

So I'll try here (hope that's OK)

I had a QSO with a VE who uses a "SpiderBeam" which I had never heard of.

Apparently it is a folded modified Moxon design wherein the reflector
and director elements (made of wire) are folded back toward the center
of the antenna

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I am actually proud of that drawing (!)

It comes as a kit that you construct with fiberglass tubes ,etc.

It is reportedly used a lot in DXpeditions.

Now they have a "home version" that is a little more sturdy.

Has anyone used it and care to comment?

Much appreciated

John
AB8O

## 263. Re: spiderbeam antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-05 19:16:44 UTC
From: The Shadow <Cranston@CobaltClub.com>
Message-ID: <xC2qj.19010$4H1.16935@newsfe07.phx>
Source record: 5600

"jawod" <jawod@fuse.net> wrote in message
news:9f8bd$47a8a44b$d066b697$23287@FUSE.NET...
>I tried to post on the antenna group but most of the conversation over
>there seems to remain on a rather esoteric (and pedantic) plan.
>
> So I'll try here (hope that's OK)
>
> I had a QSO with a VE who uses a "SpiderBeam" which I had never heard of.
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> Apparently it is a folded modified Moxon design wherein the reflector and
> director elements (made of wire) are folded back toward the center of the
> antenna
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> I am actually proud of that drawing (!)
>
> It comes as a kit that you construct with fiberglass tubes ,etc.
>
> It is reportedly used a lot in DXpeditions.
>
> Now they have a "home version" that is a little more sturdy.
>
> Has anyone used it and care to comment?
>
> Much appreciated
>
> John
> AB8O

have you seen E-Ham reviews
http://www.eham.net/reviews/detail/3688

Lamont

## 264. Re: spiderbeam antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-05 21:57:55 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.02.05.21.57.54.796401@localhost.localdomain>
Source record: 5501

Hi,

We used those back in the 80's for CB radios. Kick butt DXing antenna.

But they were quite a bit stronger ;-)

Cheers!

## 265. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-06 00:46:06 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <08bb8e81-b066-475b-b55c-c366bdc689e7@e6g2000prf.googlegroups.com>
Source record: 5502

On Feb 5, 3:52 am, K7ITM <k7...@msn.com> wrote:
> On Feb 4, 3:55 am, Andrew VK3BFA <vk3...@hotmail.com> wrote:
>
>
>
> > On Feb 4, 10:13 pm, Leon <leon...@btinternet.com> wrote:
>
> > > On 28 Jan, 11:27, "Richard" <nearlynews_em...@ntlworld.com> wrote:
>
> > > > I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> > > > 24V @ about 300mA.
>
> > > > Are switch-mode powers supplies alright or are they too noisy to be used for
> > > > receivers? TIA.
>
> > > I use a 12V switcher with my FT-817D, it's very quiet.
>
> > > Leon
>
> > You were lucky - you got a quiet one. And its the luck of the draw,
> > unfortunately.
>
> > How come we have all been conned into these switchmode things? - by
> > their very nature, without a lot of effort, they are noise generators.
> > Their cheap to make, thats their only advantage - everything else is
> > part of the spin cycle. And if it works on 2m and above, fine - you
> > will just be adding to the already horrendous RF pollution from
> > thousands of the bloody things already on HF - the suburbs are getting
> > unbearable, S9 plus noise, every night, on 80m.....160 aint to crash
> > hot either...
>
> > I refuse to have to work on a power supply to get it quiet enough to
> > be used with a radio. I am interested in the radio, not fixing
> > shortcomings in design of things that , by their very nature, are
> > unsuitable to be used near radios. That sucks. Linear technology is
> > far easier and quieter...
>
> > Andrew VK3BFA.
>
> There's another advantage of a switching supply that is very important
> to some of us: efficiency. The receiver I've been working on runs
> from 5VDC, but I have to supply power at 1.0V, 1.2V 1.8V, 2.5V and
> 3.3V, and each one of those uses a switcher. A linear regulator to 1V
> from 5V will result in a supply that's 20% efficient. The switcher

> I'm using for that supply is about 87% efficient under its operating
> conditions. If I tried to run all my supplies with linear regulators,
> I'd have to supply over twice the power; it would come close to
> violating the power rating of the 5V supply, and power dissipation in
> the receiver would result in excessive heat rise.
>
> But even with all those switchers, the only spurs greater than about
> -145dBm (antenna-input-referred) and greater than 1.5MHz are from
> digital circuits, not the power supplies. -145dBm is, I believe, 20dB
> _below_ S1 by usual definition of the S-meter units. Even the power
> supply fundamentals are only at about S1. And the supplies are not
> themselves shielded. (The receiver RF circuitry is, of course, as is
> the whole receiver module.)
>
> I would be much more circumspect about using a switching supply in a
> homebrew receiver that was going to be used where power dissipation
> wasn't an issue, but then I'd do a lot of things differently than I
> have for such a receiver. It wouldn't keep me from using switchers;
> I'd just look at the whole design in a different way. On the other
> hand, finding ones that would be adequately quiet for a 144MHz
> receiver should not be difficult at all.
>
> Cheers,
> Tom

Hi Tom,
all points noted, and readily conceded - if the things didn't have SOME advantages besides low cost, well....
You've got yours down to S1 - mm, well,.....so thats the noise floor you are limited to. And thats probably on a small range of frequencies, gawd knows where else it is radiating...(and adding to phase noise in your receiver...)

And, lets be honest, if it isn't causing ME QRM, on the frequency I want to operate, then its OK.....fine for VHF/UHF unless a spur is on your IF frequency...

The only application I can see for them is, as you say, where low power consumption/efficiency is paramount - but if you can plug your switch mode power supply into a source of AC power, then whats the problem with lugging a quiet linear supply as well as the generator required to run it?

To me, they are a flawed technology, and in a better place would not be allowed to be used because of their inherent design flaws...

Andrew VK3BFA.

(PS - I do a good "back in the good old days" rant if you like.....)

## 266. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-06 02:44:07 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <H7ednfyUEs6kgjTanZ2dnUVZ_uevnZ2d@giganews.com>
Source record: 5503

```
Andrew VK3BFA wrote:
> On Feb 5, 3:52 am, K7ITM wrote:
> > On Feb 4, 3:55 am, Andrew VK3BFA wrote:
> >
> >
> >
> > > On Feb 4, 10:13 pm, Leon wrote:
> >
> > > > On 28 Jan, 11:27, "Richard" wrote:
> >
> > > > > I have an ex AM PMR radio that I wish to use on 144Mhz. I need a
PSU feeding
> > > > > 24V @ about 300mA.
> >
> > > > > Are switch-mode powers supplies alright or are they too noisy to
be used for
> > > > > receivers? TIA.
> >
> > > > I use a 12V switcher with my FT-817D, it's very quiet.
> >
> > > > Leon
> >
> > > You were lucky - you got a quiet one. And its the luck of the draw,
> > > unfortunately.
> >
> > > How come we have all been conned into these switchmode things? - by
> > > their very nature, without a lot of effort, they are noise generators.
> > > Their cheap to make, thats their only advantage - everything else is
> > > part of the spin cycle. And if it works on 2m and above, fine - you
> > > will just be adding to the already horrendous RF pollution from
> > > thousands of the bloody things already on HF - the suburbs are getting
> > > unbearable, S9 plus noise, every night, on 80m.....160 aint to crash
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> > > I refuse to have to work on a power supply to get it quiet enough to
> > > be used with a radio. I am interested in the radio, not fixing
> > > shortcomings in design of things that , by their very nature, are
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> > > far easier and quieter...
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> > > Andrew VK3BFA.
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> > There's another advantage of a switching supply that is very important
> > to some of us: efficiency. The receiver I've been working on runs
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> > I'd have to supply over twice the power; it would come close to
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> > _below_ S1 by usual definition of the S-meter units. Even the power
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> > themselves shielded. (The receiver RF circuitry is, of course, as is
> > the whole receiver module.)
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> > homebrew receiver that was going to be used where power dissipation
> > wasn't an issue, but then I'd do a lot of things differently than I
> > have for such a receiver. It wouldn't keep me from using switchers;
> > I'd just look at the whole design in a different way. On the other
> > hand, finding ones that would be adequately quiet for a 144MHz
> > receiver should not be difficult at all.
> >
> > Cheers,
> > Tom
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> Hi Tom,
> all points noted, and readily conceded - if the things didn't have
> SOME advantages besides low cost, well....
> You've got yours down to S1 - mm, well,.....so thats the noise floor
> you are limited to. And thats probably on a small range of
> frequencies, gawd knows where else it is radiating...(and adding to
> phase noise in your receiver...)
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> switch mode power supply into a source of AC power, then whats the
> problem with lugging a quiet linear supply as well as the generator
> required to run it?
>
> To me, they are a flawed technology, and in a better place would not
> be allowed to be used because of their inherent design flaws...
>
> Andrew VK3BFA.

>
> (PS - I do a good "back in the good old days" rant if you like.....)

We use a couple of homebrew regulated DC-DC boost converters during Field Day, one to run the HF xcvr (13.8VDC @ 25A peak) and one to run the laptop PC for logging (16VDC @ 4.5A), from a 12V wet cell battery "pack"*. Prior to use, they were "sniffed" (at no load and also full load) with an HP spectrum analyzer. The analyzer showed only a few very weak spurs in the HF spectrum that we couldn't hear at all, even on 80m. Of course, they were properly designed with this use in mind... good decoupling and shielding. Switching rate is 500KHz; efficiency is in the neighborhood of 90%.

* Battery "pack":
http://img22.imagevenue.com/img.php?image=65659_battery_pack_122_1054lo.jpg

Bryan WA7PRC

## 267. SolderSmoke 76 Podcast

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-06 05:36:32 UTC
From: "bill.meara@gmail.com" <bill.meara@gmail.com>
Message-ID: <389bfc07-dc99-4a67-8fb4-fa59b07da2ff@m34g2000hsb.googlegroups.com>
Source record: 5504
Cross-posted to: rec.radio.amateur.homebrew, sci.electronics.basics, it.hobby.radioamatori, sci.astro.amateur, rec.radio.amateur.boatanchors

SolderSmoke!
A SHOW FOR ELECTRONICS HOMEBREWERS!

http://www.soldersmoke.com

Listen at: http://www.soldersmoke.com

SolderSmoke #76

February 4, 2008
On the air (HF) from Rome. Stealth antenna.
Fixing my HW 8.
Recording of AA1TJ's Tunnel Diode Beacon.
A FB QST.
Marconi's capacitor (with a quiz).
MAILBAG: Aise 3D2AA homebrewing on Fiji.
Rogier PA1ZZ's California hassles.
Jerry NR5A building tube gear in S.
Dakota.
Niels PE1OIT in defense of DSB.
Ramakrishnan VU3RDD needs articles.
ECHO-GUEST: Ron, AG5RS,
(a Knack sufferer) homebrews in in Dubai, UAE.

Tired of listening to The Stones or the BBC on your I-Pod? Wouldn't you like to be able to carry with you the kinds of ham radio conversations that you listen to while in your radio shack? Tune in to SolderSmoke!

RSS FEED: You can subscribe to the program, have them downloaded to your MP-3 player, and listen to them at your convenience. To subscribe, just cut and paste this URL into your I-poder (or similar) software.
http://www.soldersmoke.com/soldersmoke.rss

If you don't have an MP3 player you can just go to the site below and listen to the latest program (and earlier editions) using the audio software on your computer.

http://www.soldersmoke.com

All the programs are available here.

I hope you enjoy the program. Please send us
feedback.

73 from Rome
Bill M0HBR N2CQR CU2JL
http://www.gadgeteer.us

## 268. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-06 06:50:55 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <a55f1fe8-eff8-4316-a2f9-e89da4eb60a9@y5g2000hsf.googlegroups.com>
Source record: 5505

On Feb 5, 4:46 pm, Andrew VK3BFA <vk3...@hotmail.com> wrote:
> On Feb 5, 3:52 am, K7ITM <k7...@msn.com> wrote:
>
>
>
> > On Feb 4, 3:55 am, Andrew VK3BFA <vk3...@hotmail.com> wrote:
>
> > > On Feb 4, 10:13 pm, Leon <leon...@btinternet.com> wrote:
>
> > > > On 28 Jan, 11:27, "Richard" <nearlynews_em...@ntlworld.com> wrote:
>
> > > > > I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
> > > > > 24V @ about 300mA.
>
> > > > > Are switch-mode powers supplies alright or are they too noisy to be used for
> > > > > receivers? TIA.
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> > > > I use a 12V switcher with my FT-817D, it's very quiet.
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> > > > Leon
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> > > You were lucky - you got a quiet one. And its the luck of the draw,
> > > unfortunately.
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> > > How come we have all been conned into these switchmode things? - by
> > > their very nature, without a lot of effort, they are noise generators.
> > > Their cheap to make, thats their only advantage - everything else is
> > > part of the spin cycle. And if it works on 2m and above, fine - you
> > > will just be adding to the already horrendous RF pollution from
> > > thousands of the bloody things already on HF - the suburbs are getting
> > > unbearable, S9 plus noise, every night, on 80m.....160 aint to crash
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> > > Andrew VK3BFA.
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> > to some of us: efficiency. The receiver I've been working on runs
> > from 5VDC, but I have to supply power at 1.0V, 1.2V 1.8V, 2.5V and

> > 3.3V, and each one of those uses a switcher. A linear regulator to 1V
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> > the receiver would result in excessive heat rise.
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> > -145dBm (antenna-input-referred) and greater than 1.5MHz are from
> > digital circuits, not the power supplies. -145dBm is, I believe, 20dB
> > _below_ S1 by usual definition of the S-meter units. Even the power
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> > themselves shielded. (The receiver RF circuitry is, of course, as is
> > the whole receiver module.)
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> > wasn't an issue, but then I'd do a lot of things differently than I
> > have for such a receiver. It wouldn't keep me from using switchers;
> > I'd just look at the whole design in a different way. On the other
> > hand, finding ones that would be adequately quiet for a 144MHz
> > receiver should not be difficult at all.
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> > Cheers,
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> Hi Tom,
> all points noted, and readily conceded - if the things didn't have
> SOME advantages besides low cost, well....
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> frequencies, gawd knows where else it is radiating...(and adding to
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> required to run it?
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> To me, they are a flawed technology, and in a better place would not
> be allowed to be used because of their inherent design flaws...
>
> Andrew VK3BFA.
>

> (PS - I do a good "back in the good old days" rant if you like.....)

Oh, well, the receiver is 100kHz (nom.; actually is -3dB at about 18kHz) to about 38MHz. It also alternately does 70MHz IF at 36MHz bandwidth, at about the same sensitivity. Noise figure on HF is around 9dB at max sensitivity; since switchers are not stable sources, their output becomes broadband noise by the time you get to bandwidths low enough to see -145dBm (e.g., 100Hz), and there's essentially no indication of increased noise floor at the harmonics (past maybe the third) of any of the supplies, even with lots of averaging. The master clock is a low phase noise VCTCXO, and it IS run from a linear supply, with scrubbing added. That oscillator really does set the system phase noise. There are no other oscillators to worry about in the signal chain.

You're welcome to rant about the "good old days," but I probably won't hear it. I'm too busy enjoying the "even better new days" to bother looking back.

Cheers,
Tom

## 269. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-06 07:14:52 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <b1e373ab-b9ee-4a9f-8ec6-879251e230fd@m34g2000hsf.googlegroups.com>
Source record: 5506

On Feb 6, 5:50 pm, K7ITM <k7...@msn.com> wrote:
> On Feb 5, 4:46 pm, Andrew VK3BFA <vk3...@hotmail.com> wrote:
>
>
>
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> low enough to see -145dBm (e.g., 100Hz), and there's essentially no
> indication of increased noise floor at the harmonics (past maybe the
> third) of any of the supplies, even with lots of averaging. The
> master clock is a low phase noise VCTCXO, and it IS run from a linear
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> system phase noise. There are no other oscillators to worry about in
> the signal chain.
>
> You're welcome to rant about the "good old days," but I probably won't
> hear it. I'm too busy enjoying the "even better new days" to bother
> looking back.
>
> Cheers,
> Tom

Hey - I agree - I like the modern DDS chips as well, fantastic things.
(Note - AD specify separate ANALOG supply for them...Mmm?)

I try again - my point is, why bother to stuff around getting a "new"
technology to work when an "old" technology is cheap, easy,simple, and
it works with no extra fiddling.

And if you need a spectrum analyser to check your power supply for
suitability, - that is a bit ludicrous, isn't it? Mad Scientist in
attic room / Tony Hancock sketch sort of thing. Why make things so
difficult? KISS.

Never said there were no quiet switchers - just that the majority were
not....Google on SMPS noise to prove.....

Andrew VK3BFA.

## 270. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-06 09:25:31 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <NowMahKL0XqHFA0R@ifwtech.co.uk>
Source record: 5507

Andrew VK3BFA wrote:
>
>Never said there were no quiet switchers - just that the majority were
>not....Google on SMPS noise to prove.....
>
Sure... but SMPS noise is categorically NOT about "the luck of the draw"
(as you claimed a few days ago).

It's all about skill and care in the design - above all, the input and
output filtering. Done correctly, there are no problems, as proved by
the many base-station HF transceivers that have a mains SMPS built in.

When you buy a separate SMPS, don't trust to luck. Be an intelligent
consumer: read the reviews, specify what you need, ask what has been
done to minimize the noise levels, and be prepared to return the unit or
walk away.

The only real "luck" is about the SMPSes in other things that your
family and neighbours may buy...

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

## 271. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-06 10:12:06 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <6cd12fba-3092-4da1-a76b-282ca6ede67a@q21g2000hsa.googlegroups.com>
Source record: 5508

On Feb 6, 8:25 pm, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> Andrew VK3BFA wrote:
>
> >Never said there were no quiet switchers - just that the majority were
> >not....Google on SMPS noise to prove.....
>
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> walk away.
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> The only real "luck" is about the SMPSes in other things that your
> family and neighbours may buy...
>
> --
>
> 73 from Ian GM3SEK 'In Practice' columnist for RadCom
(RSGB)http://www.ifwtech.co.uk/g3sek

MM, well.....ok., I will add a rider to the "luck of the draw" - if
you have the knowledge of the things in the first place, it is
axiomatic that you would need to check it out before you buy it - get
test data, spectrum analyser screen shots, copy of CE certification'
load test data, a copy of the service manual for future
reference...probably a few more things as well, I forget.

The rest of us, well.....we basically know bugger all about them,
and we havent been hams long enough for someone to tell us "Brand X"
is useless. SO we go and buy it, and wonder what the hell went wrong.

And I been fixing the things for 20 years now as a lowly service tech
- horrible things, havent seen a quiet one yet..

AND AND...its going to get worse. Plasma TV's radiate to buggery -
they have big, and good, filters on the SMPS power supply, but they
are S9 at 5 miles.....LCD is better - EXCEPT for the plug pack SMPS
type 12v etc power supply hanging off them...had one in for repair,
the only sign it was polluting was that the (non ham) owner complained

it was interfering with his AM radio reception. (That was interesting in its own right - he had contacted the relevant authority, they had sent him a "do it yourself" booklet, and he found it...I thought that was a pretty good effort)

And the "Brand X" (still on sale, still selling in the shops) - one hapless inexperienced amateur asked me to "modify" - ie quieten it down. Plastic from and rear panels. Bugger all input filtering - and virtually none anywhere else. On 160m, spot frequencies, it was S9+. I got it down to S3, then gave up in disgust.

So, Ian - love your columns, in awe of your knowledge about practical, real radio. I certainly havent got all that much. But this is the view from the trenches, as it were - everyday practical pointy end servicing - so,if I may, I humbly beg to differ. No offense meant, to anyone, and none taken. (Yep - its true - I don't like them...)

Andrew VK3BFA

## 272. HV supply and 150 Watt modulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-07 00:48:01 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <5zsqj.3490$Sa1.2730@news02.roc.ny>
Source record: 5509

At the scrap yard I frequent I saw a 30 inch or so rack cabinet with a power supply and modulator.

The cabinet was bent and the tubes were broken but the transformers were (I think) undamaged.
It looked like the tubes in the modulator were 811. There was no speech amplifier.

This was too heavy to lift as It was mostly transformers and chokes

Any one near Sacrament CA that would want this stuff? I will provide directions to anyone that
wants to see for themselves.

Bill K7NOM

## 273. Looking for ICOM F/O cable P/N's: OPC-172, OPC-172A or OPC-189

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-07 04:02:06 UTC
From: Gary Waldeck <gary.waldeck@att.net>
Message-ID: <2pvqj.6334$0w.1874@newssvr27.news.prodigy.net>
Source record: 5510

Hello all -

I am looking for a replacement fiber optic cable that was used in the ICOM IC-901A/E multi-band radio system.

The ICOM Fiber Optic Cable part numbers that will work are: OPC-172, OPC-172A or OPC-189.

I have looked at the manufacturer's site and talked to their support staff, they are no longer stocking or supporting these parts. I have also looked on e-Bay and several other sites without success

If someone knows where I might find any of these part numbers, either new or used, I'd be grateful.

Thanks for any help.

Gary Waldeck, K6AIR

Gwaldeck (at) ix (dot) Netcom (dot) com

Looking for ICOM F/O cable P/N's: OPC-172, OPC-172A or OPC-189

## 274. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-07 07:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1202367901@panix.com>
Source record: 5511
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

# 275. Re: Looking for ICOM F/O cable P/N's: OPC-172, OPC-172A or OPC-189

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-07 16:55:35 UTC
From: Mike Andrews <mikea@mikea.ath.cx>
Message-ID: <fofd67$q3h$3@puck.litech.org>
Source record: 5512

On Thu, 07 Feb 2008 04:02:06 GMT,
Gary Waldeck <gary.waldeck@att.net> wrote in
<2pvqj.6334$0w.1874@newssvr27.news.prodigy.net>:

> Hello all -

> I am looking for a replacement fiber optic cable that was used in the ICOM
> IC-901A/E multi-band radio system.

> The ICOM Fiber Optic Cable part numbers that will work are: OPC-172,
> OPC-172A or OPC-189.

> I have looked at the manufacturer's site and talked to their support staff,
> they are no longer stocking or supporting these parts. I have also looked
> on e-Bay and several other sites without success

> If someone knows where I might find any of these part numbers, either new or
> used, I'd be grateful.

> Thanks for any help.

> Looking for ICOM F/O cable P/N's: OPC-172, OPC-172A or OPC-189

First thing to do is identify the connectors; next is to ID the cable
wavelength and whether singlemode or multimode. I'm not sure that the
mode matters all that much for shorty cables, but it can for long
runs. Once you've got those IDed, you probably can find someone local
to fab a cable for you.

If ICOM can give you that stuff, you're home free. Otherwise, you may
need to look at part numbers in the hardware.

FO cables are pretty much tinkertoys with standard connectors and
standard cables, and I'd be surprised if ICOM used something non-std.
just to make things more difficult.

Best of luck.

--
Mike Andrews, W5EGO
mikea@mikea.ath.cx
Tired old sysadmin

## 276. Extreme WebPage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-08 02:20:56 UTC
From: KF4DNA <kf4dna@kf4dna.net>
Message-ID: <c0Pqj.62885$k27.14031@bignews2.bellsouth.net>
Source record: 5513

Updated content to include data from the February 5, 2008 "Tornado Outbreak"
in the mid-south. Damage photos and radar images of the storms that roared
thru
several southern states.

http://www.kf4dna.net

## 277. Re: Looking for ICOM F/O cable P/N's: OPC-172, OPC-172A or OPC-189

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-08 19:24:38 UTC
From: jimmie68@gmail.com
Message-ID: <4362c8f5-fef4-4024-8a69-66045e2562df@p69g2000hsa.googlegroups.com>
Source record: 5514

Mike Andrews wrote:
> On Thu, 07 Feb 2008 04:02:06 GMT,
> Gary Waldeck <gary.waldeck@att.net> wrote in
> <2pvqj.6334$0w.1874@newssvr27.news.prodigy.net>:
>
> > Hello all -
>
> > I am looking for a replacement fiber optic cable that was used in the ICOM
> > IC-901A/E multi-band radio system.
>
> > The ICOM Fiber Optic Cable part numbers that will work are: OPC-172,
> > OPC-172A or OPC-189.
>
> > I have looked at the manufacturer's site and talked to their support staff,
> > they are no longer stocking or supporting these parts. I have also looked
> > on e-Bay and several other sites without success
>
> > If someone knows where I might find any of these part numbers, either new or
> > used, I'd be grateful.
>
> > Thanks for any help.
>
> > Looking for ICOM F/O cable P/N's: OPC-172, OPC-172A or OPC-189
>
> First thing to do is identify the connectors; next is to ID the cable
> wavelength and whether singlemode or multimode. I'm not sure that the
> mode matters all that much for shorty cables, but it can for long
> runs. Once you've got those IDed, you probably can find someone local
> to fab a cable for you.
>
> If ICOM can give you that stuff, you're home free. Otherwise, you may
> need to look at part numbers in the hardware.
>
> FO cables are pretty much tinkertoys with standard connectors and
> standard cables, and I'd be surprised if ICOM used something non-std.
> just to make things more difficult.
>
> Best of luck.
>
> --
> Mike Andrews, W5EGO
> mikea@mikea.ath.cx
> Tired old sysadmin

Finding a suitable replacement may be as simple as going to circuit city or best buy. A lot of audio/video equipment uses fiber optic interconnect cables.

Jimmie

## 278. Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-09 19:45:07 UTC
From: RP <rpjones@NOSPAMverizon.net>
Message-ID: <7pnrj.1378$J93.474@trndny08>
Source record: 5515

Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy load for audio and guitar amp work. I have forgotten what type of oil to use for heat transfer.
Id like something easy to get (like peanut or something with a high flashpoint).
Don't want to loose the house.
Joe "NOSPAM"

## 279. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-09 19:56:13 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9A3F8DDCED900VeebleFetzer@216.250.184.7>
Source record: 5516

In news:7pnrj.1378$J93.474@trndny08 "RP" <rpjones@NOSPAMverizon.net>
wrote:

> Hi I need to building a 4 ohm 1500 watt "cantenna paint can style"
> dummy load for audio and guitar amp work. I have forgotten what type
> of oil to use for heat transfer.
> Id like something easy to get (like peanut or something with a high
> flashpoint).
> Don't want to loose the house.

MFJ sells the correct "transformer oil" by the gallon for $30/gal, but the
manual for their version of the cantenna says you can use "mineral oil".

http://www.mfjenterprises.com/Product.php?productid=MFJ-21

http://www.mfjenterprises.com/man/pdf/MFJ-250X.pdf

--
Bert Hyman St. Paul, MN bert@iphouse.com

## 280. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-09 20:01:16 UTC
From: The Shadow <Repose@Zilch.com>
Message-ID: <7Enrj.24370$ov5.23885@newsfe15.phx>
Source record: 5517

"RP" <rpjones@NOSPAMverizon.net> wrote in message
news:7pnrj.1378$J93.474@trndny08...
> Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy
> load for audio and guitar amp work. I have forgotten what type of oil to
> use for heat transfer.
> Id like something easy to get (like peanut or something with a high
> flashpoint).
> Don't want to loose the house.
> Joe "NOSPAM"
>

See E-Ham Article
http://www.eham.net/forums/Elmers/33528

Also a construction article with oil recommendation

http://www.k4eaa.com/dummy.html

Lamont

## 281. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-10 00:38:53 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <MJidnfCir_ED2jPanZ2dnUVZ_hOdnZ2d@comcast.com>
Source record: 5518

"RP" <rpjones@NOSPAMverizon.net> wrote in message
news:7pnrj.1378$J93.474@trndny08...
> Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy load
> for audio and guitar amp work. I have forgotten what type of oil to use for
> heat transfer.
> Id like something easy to get (like peanut or something with a high
> flashpoint).
> Don't want to loose the house.
> Joe "NOSPAM"
>

In another life, I worked at a Motorola commercial 2-way radio shop. We used Heathkit Cantennas for all of our test benches. All were filled with mineral oil. Ran that way for years, never a problem.

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

"In theory, there isn't any difference between theory and practice. In practice, there is." - Yogi Berra

## 282. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-10 17:02:06 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <lqauq310ffrqhp111bgg3vb886bqmlbduc@4ax.com>
Source record: 5519

On Sat, 09 Feb 2008 19:45:07 GMT, "RP" <rpjones@NOSPAMverizon.net>
wrote:

>Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy
>load for audio and guitar amp work. I have forgotten what type of oil to use
>for heat transfer.
>Id like something easy to get (like peanut or something with a high
>flashpoint).
>Don't want to loose the house.
>Joe "NOSPAM"
>
The idea of using a cantenna for audio is new to me.

I would be inclined to use distilled water for continuous use and tap
water if use is intermittent. Cheap & trivial risks!

As I think back of all the lash ups I have used to build and test
power supplies through the years I think you have led me to a much
more practical solution!

John Ferrell W8CCW
"Life is easier if you learn to
plow around the stumps"

## 283. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-10 21:18:30 UTC
From: MRe <m.reneman=geenspam=@hccnet.nl>
Message-ID: <47af6a8f$0$85780$e4fe514c@news.xs4all.nl>
Source record: 5520

Even vegetable oil will do, as this (partly german) website
proves.....:-)
http://www.markusleonhardt.de/en/oelrechner.html

MRE
PE1NQR

"Jim Higgins" <invalid@invalid.invalid> schreef in bericht
news:4ahuq3l04bf6uiq7oovu7gk2v87q8j9948@4ax.com...
> On Sat, 09 Feb 2008 19:45:07 GMT, "RP"
> <rpjones@NOSPAMverizon.net>
> wrote:
>
>>Hi I need to building a 4 ohm 1500 watt "cantenna paint can
>>style" dummy
>>load for audio and guitar amp work. I have forgotten what type
>>of oil to use
>>for heat transfer.
>>Id like something easy to get (like peanut or something with a
>>high
>>flashpoint).
>>Don't want to loose the house.
>>Joe "NOSPAM"
>
>
> I suggest light mineral oil, unless you can get transformer oil
> cheaper. Both are mineral oil, one just a bit more refined,
> which is
> absolutely unnecessary in your application - or as 50 ohm
> amateur
> radio dummy loads for that matter.
>
> I only listed the "Transformer Oil" link below for its
> reference to
> mineral oil. I'm not for a second suggesting any of the fancy
> new
> alternatives mentioned at that link.
>
> http://en.wikipedia.org/wiki/Mineral_oil
> http://en.wikipedia.org/wiki/Transformer_oil
>

## 284. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-11 14:33:41 UTC
From: NM0S <ai9e_qrp@yahoo.com>
Message-ID: <0f0eb321-9ff8-4c1c-ae70-96200e6dfad5@s19g2000prg.googlegroups.com>
Source record: 5521

On Feb 9, 1:45 pm, "RP" <rpjo...@NOSPAMverizon.net> wrote:
> Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy
> load for audio and guitar amp work. I have forgotten what type of oil to use
> for heat transfer.
> Id like something easy to get (like peanut or something with a high
> flashpoint).
> Don't want to loose the house.
> Joe "NOSPAM"

I used 'baby oil' - the local pharmacy had a bunch marked down 80% as
it was close to expiration. It is just scented mineral oil - what
could 'expire' in that? It works fine in my cantenna, and smells
better than anything else in the shack.

73 - NM0S

## 285. Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-11 19:45:37 UTC
From: WA5DXP <nospam@nospam.com>
Message-ID: <dk81r35j0230klugrkldde6m1idc557ogs@4ax.com>
Source record: 5522

Anyone have the above QST that can possibly scan an article
E-mail it to me or give me some dimensions from the article?

"Adapting Hy Tower for use on 30 M"

Thanks,

Jim, WA5DXP
wa5dxp@gmail.com

## 286. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-11 19:52:52 UTC
From: Ben Jackson <ben@ben.com>
Message-ID: <slrnfr19sk.2961.ben@saturn.home.ben.com>
Source record: 5523

```
On 2008-02-09, RP <rpjones@NOSPAMverizon.net> wrote:
> Id like something easy to get (like peanut or something with a high
> flashpoint).

Use mineral oil. Don't use any kind of food oil -- it will go rancid.

--
Ben Jackson AD7GD
<ben@ben.com>
http://www.ben.com/
```

## 287. R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 00:13:41 UTC
From: JimL <jimbethladd@aol.com>
Message-ID: <47b0e48e$0$21978$ec3e2dad@news.usenetmonster.com>
Source record: 5524

Greetings- can someone provide data on their home made choke for connecting across the output of a 1 KW, 3.5 mhz , transmitter working into 50 ohms. The so called safety choke to prevent the HV plate voltage from appearing on the antenna in case of failure of a blocking capacitor. Normally a commercial 2.5 MHY RFC is used. Perhaps something wound on a ferrite rod. Thanks, Jim.

## 288. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 00:38:37 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <kfqdnXNnSroTdy3anZ2dnUVZ_qqgnZ2d@comcast.com>
Source record: 5525

"JimL" <jimbethladd@aol.com> wrote in message
news:47b0e48e$0$21978$ec3e2dad@news.usenetmonster.com...
> Greetings- can someone provide data on their home made choke for connecting
> across the output of a 1 KW, 3.5 mhz , transmitter working into 50 ohms. The
> so called safety choke to prevent the HV plate voltage from appearing on the
> antenna in case of failure of a blocking capacitor. Normally a commercial 2.5
> MHY RFC is used. Perhaps something wound on a ferrite rod. Thanks, Jim.
>

You might try calculating the inductance of a choke that presents about 500 to
1000 ohms of inductive reactance of the transmitter frequency. Use wire that
can handle about 2 to 3 times the plate current of the final, or 2 to 3 times
the HV fuse rating.
The math is left as an exercise for the OP.

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the
address)

"In theory, there isn't any difference between theory and practice. In
practice, there is." - Yogi Berra

## 289. unusual manuals and focus coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 01:23:45 UTC
From: patrick jankowiak <eccm@swbell.net>
Message-ID: <By6sj.11025$Ej5.6299@newssvr29.news.prodigy.net>
Source record: 5526
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew

Hi,

looking for these things:

]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]

MANUALS:

1.)
T-408/URT-12, also called AN/URT-12
Military radio transmitter, Coast Guard

2.)
Conrac model CNA-8
8" black and white video monitor, tube kind

3.)
RCA model TM-9AN
8" black and white video monitor, tube kind

(#2 and #3 are very similar)

]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]

ITEMS:

4.)
50 degree to 110 degree yokes fitting electromagnetic deflected CRTs
that have a "small-shell duodecal base"

5.)
focus coils and magnet assemblied from old TV set CRTs that have a
"small-shell duodecal base"

Referring to the base type of the CRTs is the best I can do to to
indicate the diameter of the tube neck, which is about 1.5" The base
socket has 12 positions (pins) but not all are used. Usually 6 are used,
or 5, in the case of a magnetic focus CRT.

All the yokes and focus devices I am looking for refer to those used on
black and white TV sets with this kind of CRT neck diameter. This is
really old junque and much has been pitched if the original TV chassis
was unserviceable, etc.

These are for a project where I want to operate a 10" electromagnetic
deflection, magnetic focus CRT. There are a number of NOS CRTs having
interesting phosphors, being from radar sets. Basically I saved them

from the landfill, and want to put together a few unusual monochrome video monitors. Why stare at the boxes on a shelf??

For me, driving a yoke is trivial, but finding ones for these CRTs is a challenge.

I have a few 10SP4, which are 50 degree deflection, one 10UP14B, and some 10VP15 and 10VP47's -FAA spares.

]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]

I can be reached at the reply-to (un-mung it..) or please find my contact info downscreen at www.bunkerofdoom.com

thanks,
Patrick

## 290. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 01:26:58 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <DB6sj.175$aj7.28@newsfe20.lga>
Source record: 5527

Watch out for possible core saturation when using a ferrite device
for that application.

Pete

## 291. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 02:10:19 UTC
From: JimL <jimbethladd@aol.com>
Message-ID: <47b0ffe2$0$21995$ec3e2dad@news.usenetmonster.com>
Source record: 5528

"DaveM" <masondg4499@comcast99.net> wrote in message
news:kfqdnXNnSroTdy3anZ2dnUVZ_qqgnZ2d@comcast.com...
> "JimL" <jimbethladd@aol.com> wrote in message
> news:47b0e48e$0$21978$ec3e2dad@news.usenetmonster.com...
>> Greetings- can someone provide data on their home made choke for
>> connecting across the output of a 1 KW, 3.5 mhz , transmitter working
>> into 50 ohms. The so called safety choke to prevent the HV plate voltage
>> from appearing on the antenna in case of failure of a blocking capacitor.
>> Normally a commercial 2.5 MHY RFC is used. Perhaps something wound on a
>> ferrite rod. Thanks, Jim.
>>
>
> You might try calculating the inductance of a choke that presents about
> 500 to 1000 ohms of inductive reactance of the transmitter frequency. Use
> wire that can handle about 2 to 3 times the plate current of the final, or
> 2 to 3 times the HV fuse rating.
> The math is left as an exercise for the OP.
>
> --
> Dave M
> MasonDG44 at comcast dot net (Just substitute the appropriate characters
> in the address)
>
> "In theory, there isn't any difference between theory and practice. In
> practice, there is." - Yogi Berra
> Thanks. That calculation is trivial. A more difficult calculation is
> determining what effect say, a 25 uhy choke, would have on the pi network
> to which it is connected. Evidentally 1 or 2.5 mhy has a negligible
> effect, since it never is considered in the literature I have seen.
> Perhaps the same is true for the 25 uhy., but I am too lazy to do the
> math.Quicker to just try same. Jim.

## 292. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 02:47:54 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <WMidnWaqt5kmlSzanZ2dnUVZ_uCinZ2d@giganews.com>
Source record: 5529

RP wrote:
> Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy
> load for audio and guitar amp work. I have forgotten what type of oil to
use
> for heat transfer.
> Id like something easy to get (like peanut or something with a high
> flashpoint).
> Don't want to loose the house.
> Joe "NOSPAM"

Hi Joe,

I recently revived a Cantenna. When it came time to refill, I considered mineral oil and decided to go with transfomer oil because of the better thermal characteristic. Others have suggested that you can buy it from MFJ, but I found it as close as my local power company. It was no big deal for them to give me a gallon. ^5

Your audio dummy load sounds interesting. You might consider keeping an eye on the oil temperature, as my Cantenna gets noticeably warm fairly quickly... can't drive it at 1KW sinewave for very long. I envision a thermistor > comparator > audible indicator.

73,
Bryan WA7PRC

## 293. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 03:58:06 UTC
From: Erich <n6fd@mchsi.com>
Message-ID: <iP8sj.29645$9j6.18226@attbi_s22>
Source record: 5530

Mineral oil works well. The only problem I had was that the extreme
temperature swings where I live put some condensation in the cantenna
and the bottom eventually rusted out. An old paint can works just as
well but doesn't have the fancy graphics on the outside.

The look on the clerk's face when you check out in the drug store with a
gallon of mineral oil - PRICELESS!

Erich, N6FD

Jim Higgins wrote:
> On Sat, 09 Feb 2008 19:45:07 GMT, "RP" <rpjones@NOSPAMverizon.net>
> wrote:
>
>> Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy
>> load for audio and guitar amp work. I have forgotten what type of oil to use
>> for heat transfer.
>> Id like something easy to get (like peanut or something with a high
>> flashpoint).
>> Don't want to loose the house.
>> Joe "NOSPAM"
>
>
> I suggest light mineral oil, unless you can get transformer oil
> cheaper. Both are mineral oil, one just a bit more refined, which is
> absolutely unnecessary in your application - or as 50 ohm amateur
> radio dummy loads for that matter.
>
> I only listed the "Transformer Oil" link below for its reference to
> mineral oil. I'm not for a second suggesting any of the fancy new
> alternatives mentioned at that link.
>
> http://en.wikipedia.org/wiki/Mineral_oil
> http://en.wikipedia.org/wiki/Transformer_oil
>

## 294. Re: Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 12:11:07 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <bf2986c4-5c34-42e1-8606-f2ac3c4ea5c3@i12g2000prf.googlegroups.com>
Source record: 5531

On Feb 11, 2:45 pm, WA5DXP <nos...@nospam.com> wrote:
> Anyone have the above QST that can  possibly scan an article
>  E-mail it to me or give me some dimensions from the article?
>
> "Adapting Hy Tower for use on 30 M"
>
> Thanks,
>
> Jim, WA5DXP
> wa5...@gmail.com

It is copyright material... How about you calling QST and offering to
pay the small fee to have a copy sent?

denny - k8do

## 295. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 14:27:38 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <f1c32875-a223-4dae-94f5-7c7f398fba85@m34g2000hsf.googlegroups.com>
Source record: 5532

On Feb 11, 7:13 pm, "JimL" <jimbethl...@aol.com> wrote:
> Greetings- can someone provide data on their home made choke for connecting
> across the output of a 1 KW, 3.5 mhz , transmitter  working into 50 ohms.
> The so called safety choke to prevent the HV plate voltage from appearing on
> the antenna in case of failure of a blocking capacitor. Normally a
> commercial 2.5 MHY  RFC is used. Perhaps something wound on a ferrite rod.

The requirements for the safety choke are pretty tame compared to a
plate choke. The impedance level around it is 50 ohms (contrast it
with thousands of ohms around a plate choke), so you don't have to
maintain a particularly high RF impedance.

In other words, the same choke you used for the plate choke would work
just fine.

# 296. SALE TUBES NEW

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 16:59:42 UTC
From: Vintage <radiovintage2000@yahoo.it>
Message-ID: <9b3b0353-0d54-44cc-bd50-18e32fa971f0@n20g2000hsh.googlegroups.com>
Source record: 5533

Sale stock Vacuum Tubes New in BOX

Some types 7403 / 12SK7 / 12SW7 / 2050W / 5894 / 2C43 /
5R4 / 5933WA / 4X150A AND OTHER TYPE.

TNX FRANK

## 297. Re: Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 17:18:17 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13r3l6hsel37m57@corp.supernews.com>
Source record: 5534

Denny wrote:

> On Feb 11, 2:45 pm, WA5DXP <nos...@nospam.com> wrote:
>
>>Anyone have the above QST that can possibly scan an article
>> E-mail it to me or give me some dimensions from the article?
>>
>>"Adapting Hy Tower for use on 30 M"
>>
>>Thanks,
>>
>>Jim, WA5DXP
>>wa5...@gmail.com
>
>
> It is copyright material... How about you calling QST and offering to
> pay the small fee to have a copy sent?
>
How about lobbying the ARRL, and I mean strongly, to release the antique issues into the public domain or at least make PDFs available on their site, after all QST is an organ of the radio amateur service, and the old content should not be the gist of profit.

Michael

## 298. Re: 6146 data

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 22:17:04 UTC
From: jimmie68@gmail.com
Message-ID: <d54cb640-47b1-41e6-a54b-c391deb54625@s12g2000prg.googlegroups.com>
Source record: 5535

Jimmie D wrote:
> "cliff wright" <c.c.wright@paradise.net.nz> wrote in message
> news:47a0fcd9$1@clear.net.nz...
> > Harold E. Johnson wrote:
> >> "Jimmie D" <GFENDER@carolina.rr.com> wrote in message
> >> news:4796a402$0$22578$4c368faf@roadrunner.com...
> >>
> >>>I am trying to build a class AB linear amp usig a 6146, plate voltage
> >>>will be about 600 volts. What's the peak drive voltage for this
> >>>configuration.
> >>>
> >>>Jimmie
> >>
> >> About one Volt less than the DC bias on the grid.
> >>
> >> W4ZCB
> >>
> >>
> >>
> > Hi Jimmy.
> > Harold is just about right for class AB1. You can get a bit more out in
> > AB2 with a small grid current but I don't reccomend it. Remember to keep
> > your cathode leads short and well bypassed.
> > The best way is to have a grid current meter and NOT to run the stage
> > into grid current.
> > The 6146 especially the B type can be a bit unstable otherwise. I found
> > that my old Kenwood 820S doesn't like them in the final. The original
> > Japanese S2001's though apparently similar to the 6146B work much better.
> > 73's Cliff Wright ZL1BDA
>
> THats what I thought too but I wasnt getting the plate current I should be
> getting. I figured I may have a design poblem since this was a new amp still
> in the design stage. A few math errors on my part muddied the waters even
> more. At first I calculated my drive voltage from my transceiver very close
> to 45 volts, my bias voltage. Then I recalculated it again once I started
> having problems but this time got 36 volts. Well, 45 was correct but I wasnt
> getting that much, more like 35. The problem wasnt a design flaw though. It
> was just a cockpit error on my part. I was running my transceiver off of 12
> volts instead of 13.5. This made quite a bit of difference in my output.
>
> Now to get this ugly saftey hazard put together so I can use it without
> risking family and pets.
>
> Jimmie

I've been trying to build a 6m for a few weeks now having the usual build it from scratch problems. Today I was out in the barn looking for a suitable plate choke when I found just what I wanted underneath a chassis, a Z-50 choke. After closer inspection of the chassis I realised it was an amp using a pair of 6146Bs almost identical to what i was trying to build. Initial test showed the B+ filter caps shorted and diodes were bad. Power supply came up fine after finishing the repairs

I also found part of an old GE lo band VHF transmitter that would also make a great 6M amp.
power supply seems to work fine. Every thing except the PA (paralell 807s) stage and power supply had been stripped from the chassis.

I was wondering If anyone else had ever started a project to discover they already had it but didnt know it.

Jimmie

## 299. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-12 22:36:21 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <-_mdnUGcP4T4gi_anZ2dnUVZ_hmtnZ2d@comcast.com>
Source record: 5536

"JimL" <jimbethladd@aol.com> wrote in message
news:47b0ffe2$0$21995$ec3e2dad@news.usenetmonster.com...
>
> "DaveM" <masondg4499@comcast99.net> wrote in message
> news:kfqdnXNnSroTdy3anZ2dnUVZ_qqgnZ2d@comcast.com...
>> "JimL" <jimbethladd@aol.com> wrote in message
>> news:47b0e48e$0$21978$ec3e2dad@news.usenetmonster.com...
>>> Greetings- can someone provide data on their home made choke for connecting
>>> across the output of a 1 KW, 3.5 mhz , transmitter working into 50 ohms.
>>> The so called safety choke to prevent the HV plate voltage from appearing on
>>> the antenna in case of failure of a blocking capacitor. Normally a
>>> commercial 2.5 MHY RFC is used. Perhaps something wound on a ferrite rod.
>>> Thanks, Jim.
>>>
>>
>> You might try calculating the inductance of a choke that presents about 500
>> to 1000 ohms of inductive reactance of the transmitter frequency. Use wire
>> that can handle about 2 to 3 times the plate current of the final, or 2 to 3
>> times the HV fuse rating.
>> The math is left as an exercise for the OP.
>>
>> --
>> Dave M
>> MasonDG44 at comcast dot net (Just substitute the appropriate characters in
>> the address)
>>
>> "In theory, there isn't any difference between theory and practice. In
>> practice, there is." - Yogi Berra
>> Thanks. That calculation is trivial. A more difficult calculation is
>> determining what effect say, a 25 uhy choke, would have on the pi network to
>> which it is connected. Evidentally 1 or 2.5 mhy has a negligible effect,
>> since it never is considered in the literature I have seen. Perhaps the same
>> is true for the 25 uhy., but I am too lazy to do the math.Quicker to just try
>> same. Jim.
>
>

My reasoning for recommending those values is this:
Since the circuit impedance around the RFC is 50 ohms, I figured that if the
inductor presented a reactance around 10-20 times that, it wouldn't upset the
tuning (well, maybe just a tad, but insignificant). The wire in the coil should
be big enough to carry the HV current until the HV fuse blows, without damaging
the coil itself.
If you figure the physical size of a 25-50 uH coil, using wire that can handle

the current, it might be a bit large. A 1-2.5 mHy coil would be very large (lots of turns of large wire).
Considering the power levels involved, using a magnetic core in the coil would probably waste a good bit of heat.
If you're going to experiment with inductor sizes, I'd be interested in hearing your results.
--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

"In theory, there isn't any difference between theory and practice. In practice, there is." - Yogi Berra

## 300. Re: unusual manuals and focus coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-13 01:32:08 UTC
From: jimmie68@gmail.com
Message-ID: <c076f774-6142-43ce-b88a-163120120c0d@q77g2000hsh.googlegroups.com>
Source record: 5537
Cross-posted to: rec.radio.amateur.equipment, rec.radio.amateur.boatanchors, rec.antiques.radio+phono, rec.radio.amateur.homebrew

patrick jankowiak wrote:
> Hi,
>
> looking for these things:
>
> ]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]
>
>
> MANUALS:
>
> 1.)
> T-408/URT-12, also called AN/URT-12
> Military radio transmitter, Coast Guard
>
> 2.)
> Conrac model CNA-8
> 8" black and white video monitor, tube kind

Just threw one out, You got a BRITE DISPLAY SYSTEM or something.

Jimmie

## 301. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-13 02:12:41 UTC
From: JimL <jimbethladd@aol.com>
Message-ID: <47b251f0$0$21987$ec3e2dad@news.usenetmonster.com>
Source record: 5538

"DaveM" <masondg4499@comcast99.net> wrote in message
news:-_mdnUGcP4T4gi_anZ2dnUVZ_hmtnZ2d@comcast.com...
> "JimL" <jimbethladd@aol.com> wrote in message
> news:47b0ffe2$0$21995$ec3e2dad@news.usenetmonster.com...
>>
>> "DaveM" <masondg4499@comcast99.net> wrote in message
>> news:kfqdnXNnSroTdy3anZ2dnUVZ_qqgnZ2d@comcast.com...
>>> "JimL" <jimbethladd@aol.com> wrote in message
>>> news:47b0e48e$0$21978$ec3e2dad@news.usenetmonster.com...
>>>> Greetings- can someone provide data on their home made choke for
>>>> connecting across the output of a 1 KW, 3.5 mhz , transmitter working
>>>> into 50 ohms. The so called safety choke to prevent the HV plate
>>>> voltage from appearing on the antenna in case of failure of a blocking
>>>> capacitor. Normally a commercial 2.5 MHY RFC is used. Perhaps
>>>> something wound on a ferrite rod. Thanks, Jim.
>>>>
>>>
>>> You might try calculating the inductance of a choke that presents about
>>> 500 to 1000 ohms of inductive reactance of the transmitter frequency.
>>> Use wire that can handle about 2 to 3 times the plate current of the
>>> final, or 2 to 3 times the HV fuse rating.
>>> The math is left as an exercise for the OP.
>>>
>>> --
>>> Dave M
>>> MasonDG44 at comcast dot net (Just substitute the appropriate
>>> characters in the address)
>>>
>>> "In theory, there isn't any difference between theory and practice. In
>>> practice, there is." - Yogi Berra
>>> Thanks. That calculation is trivial. A more difficult calculation is
>>> determining what effect say, a 25 uhy choke, would have on the pi
>>> network to which it is connected. Evidentally 1 or 2.5 mhy has a
>>> negligible effect, since it never is considered in the literature I have
>>> seen. Perhaps the same is true for the 25 uhy., but I am too lazy to do
>>> the math.Quicker to just try same. Jim.
>>
>>
>
> My reasoning for recommending those values is this:
> Since the circuit impedance around the RFC is 50 ohms, I figured that if
> the inductor presented a reactance around 10-20 times that, it wouldn't
> upset the tuning (well, maybe just a tad, but insignificant). The wire in
> the coil should be big enough to carry the HV current until the HV fuse

> blows, without damaging the coil itself.
> If you figure the physical size of a 25-50 uH coil, using wire that can
> handle the current, it might be a bit large. A 1-2.5 mHy coil would be
> very large (lots of turns of large wire).
> Considering the power levels involved, using a magnetic core in the coil
> would probably waste a good bit of heat.
> If you're going to experiment with inductor sizes, I'd be interested in
> hearing your results.
> --
> Dave M
> MasonDG44 at comcast dot net (Just substitute the appropriate characters
> in the address)
>
> "In theory, there isn't any difference between theory and practice. In
> practice, there is." - Yogi Berra
> Hi Dave, I installed a 40 uhy choke, 1" inch in dia,, closewound with #22
> enameled wire, about 1.75" long. My plate choke is #26 as I remember, and
> 140 uhy. Plate current is 600 ma max, plate voltage supply is 2300V, power
> out is 600 w. key down from a pair of 813's in GG. The new choke has not
> gone up in flames, and amp tunes OK. 40 uhy gives a reactance of about 880
> ohms at 3.5 mhz. 73, Jim.

## 302. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-13 02:13:00 UTC
From: COLIN LAMB <k7fm@teleport.com>
Message-ID: <13r4kh7tk12m1a@corp.supernews.com>
Source record: 5539

1000 ohms reactance at 3.5 MHz would be almost invisible to the rf output tuning. I have a drawer full of old surplus rf chokes, wound with large wire. Generally one section. About 1/2 the size of a golf ball. I have thrown those in and they work fine. For lower power, a standard 2.5 mh choke is ok, but I like larger wire size for higher voltage and current. The old tuning units from the BC-375 would have a handful of such chokes, with nice ceramic stand-offs.

73, Colin K7FM

## 303. Re: spiderbeam antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-13 02:16:11 UTC
From: "Tom C." <tecoates@comcast.net>
Message-ID: <boGdnRuvNvBxzy_anZ2dnUVZ_gudnZ2d@comcast.com>
Source record: 5540

There was a review in QST in the past year or so. Rosalie White was the
author, I believe.

Tom, N3IJ

"jawod" <jawod@fuse.net> wrote in message
news:9f8bd$47a8a44b$d066b697$23287@FUSE.NET...
> I tried to post on the antenna group but most of the conversation over
> there seems to remain on a rather esoteric (and pedantic) plan.
>
> So I'll try here (hope that's OK)
>
> I had a QSO with a VE who uses a "SpiderBeam" which I had never heard of.
>
> Apparently it is a folded modified Moxon design wherein the reflector
> and director elements (made of wire) are folded back toward the center
> of the antenna
>
> _______
> \ /
> \ /
> _________
>
> / \
> /_____\
>
> I am actually proud of that drawing (!)
>
> It comes as a kit that you construct with fiberglass tubes ,etc.
>
> It is reportedly used a lot in DXpeditions.
>
> Now they have a "home version" that is a little more sturdy.
>
> Has anyone used it and care to comment?
>
> Much appreciated
>
> John
> AB8O

## 304. Re: Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-13 11:52:43 UTC
From: Jim <nospam@nospam.com>
Message-ID: <hbm5r3pqh7r484rkh9c95efibcqqh9qbuo@4ax.com>
Source record: 5541

Did you not get enough nursing as a child? You probably
work for some Government agency. Thanks for your help.

On Tue, 12 Feb 2008 04:11:07 -0800 (PST), Denny <k8do@mailblocks.com>
wrote:

>On Feb 11, 2:45ï¿½pm, WA5DXP <nos...@nospam.com> wrote:
>> Anyone have the above QST that can ï¿½possibly scan an article
>> ï¿½E-mail it to me or give me some dimensions from the article?
>>
>> "Adapting Hy Tower for use on 30 M"
>>
>> Thanks,
>>
>> Jim, WA5DXP
>> wa5...@gmail.com
>
>It is copyright material... How about you calling QST and offering to
>pay the small fee to have a copy sent?
>
>denny - k8do

## 305. Mitsubishi block madifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-13 11:57:22 UTC
From: Dave Bullock <DaveB@ihr.mrc.ac.uk>
Message-ID: <foulv2$duk$1@oyez.ccc.nottingham.ac.uk>
Source record: 5542

Hi Homebrewers,
Has anyone ever seen information on modifing the innards of Mitsubishi M67730's.
The top comes off really easily and the input and output filters (which have series inductors and caps to ground) seem to have several positions for fitting the capacitors as though the block is quite wideband and the filters set the bandpass.
Just an idea that these 30 Watt 170MHz units may easily be moved down onto 2m?
Has anyone attempted this?
Thanks in anticpation
Dave

## 306. Re: R.F. Choke Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-13 23:01:43 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <P9-dnZmtMaZF6y7anZ2dnUVZ_s2tnZ2d@comcast.com>
Source record: 5543

"JimL" <jimbethladd@aol.com> wrote in message
news:47b251f0$0$21987$ec3e2dad@news.usenetmonster.com...
>
> "DaveM" <masondg4499@comcast99.net> wrote in message
> news:-_mdnUGcP4T4gi_anZ2dnUVZ_hmtnZ2d@comcast.com...
>> "JimL" <jimbethladd@aol.com> wrote in message
>> news:47b0ffe2$0$21995$ec3e2dad@news.usenetmonster.com...
>>>
>>> "DaveM" <masondg4499@comcast99.net> wrote in message
>>> news:kfqdnXNnSroTdy3anZ2dnUVZ_qqgnZ2d@comcast.com...
>>>> "JimL" <jimbethladd@aol.com> wrote in message
>>>> news:47b0e48e$0$21978$ec3e2dad@news.usenetmonster.com...
>>>>> Greetings- can someone provide data on their home made choke for
>>>>> connecting across the output of a 1 KW, 3.5 mhz , transmitter working
>>>>> into 50 ohms. The so called safety choke to prevent the HV plate voltage
>>>>> from appearing on the antenna in case of failure of a blocking capacitor.
>>>>> Normally a commercial 2.5 MHY RFC is used. Perhaps something wound on a
>>>>> ferrite rod. Thanks, Jim.
>>>>>
>>>>
>>>> You might try calculating the inductance of a choke that presents about 500
>>>> to 1000 ohms of inductive reactance of the transmitter frequency. Use wire
>>>> that can handle about 2 to 3 times the plate current of the final, or 2 to
>>>> 3 times the HV fuse rating.
>>>> The math is left as an exercise for the OP.
>>>>
>>>> --
>>>> Dave M
>>>> MasonDG44 at comcast dot net (Just substitute the appropriate characters
>>>> in the address)
>>>>
>>>> "In theory, there isn't any difference between theory and practice. In
>>>> practice, there is." - Yogi Berra
>>>> Thanks. That calculation is trivial. A more difficult calculation is
>>>> determining what effect say, a 25 uhy choke, would have on the pi network
>>>> to which it is connected. Evidentally 1 or 2.5 mhy has a negligible
>>>> effect, since it never is considered in the literature I have seen. Perhaps
>>>> the same is true for the 25 uhy., but I am too lazy to do the math.Quicker
>>>> to just try same. Jim.
>>>
>>>
>>
>> My reasoning for recommending those values is this:
>> Since the circuit impedance around the RFC is 50 ohms, I figured that if the

>> inductor presented a reactance around 10-20 times that, it wouldn't upset the
>> tuning (well, maybe just a tad, but insignificant). The wire in the coil
>> should be big enough to carry the HV current until the HV fuse blows, without
>> damaging the coil itself.
>> If you figure the physical size of a 25-50 uH coil, using wire that can
>> handle the current, it might be a bit large. A 1-2.5 mHy coil would be very
>> large (lots of turns of large wire).
>> Considering the power levels involved, using a magnetic core in the coil
>> would probably waste a good bit of heat.
>> If you're going to experiment with inductor sizes, I'd be interested in
>> hearing your results.
>> --
>> Dave M
>> MasonDG44 at comcast dot net (Just substitute the appropriate characters in
>> the address)
>>
>> "In theory, there isn't any difference between theory and practice. In
>> practice, there is." - Yogi Berra
>> Hi Dave, I installed a 40 uhy choke, 1" inch in dia,, closewound with #22
>> enameled wire, about 1.75" long. My plate choke is #26 as I remember, and 140
>> uhy. Plate current is 600 ma max, plate voltage supply is 2300V, power out is
>> 600 w. key down from a pair of 813's in GG. The new choke has not gone up in
>> flames, and amp tunes OK. 40 uhy gives a reactance of about 880 ohms at 3.5
>> mhz. 73, Jim.
>
>

Thanks for reporting back with the results. Glad to hear that the tuning wasn't upset, and that everything seems to be going according to theory.
Good luck with the rest of the project.

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

"In theory, there isn't any difference between theory and practice. In practice, there is." - Yogi Berra

## 307. Re: Mitsubishi block madifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-14 15:49:59 UTC
From: PhattyMo <PhattyMo@nospam.gmail>
Message-ID: <47b4629b$0$3568$815e3792@news.qwest.net>
Source record: 5544

Dave Bullock wrote:
> Hi Homebrewers,
> Has anyone ever seen information on modifing the innards of Mitsubishi
> M67730's.
> The top comes off really easily and the input and output filters (which have
> series inductors and caps to ground) seem to have several positions for
> fitting the capacitors as though the block is quite wideband and the filters
> set the bandpass.
> Just an idea that these 30 Watt 170MHz units may easily be moved down onto
> 2m?
> Has anyone attempted this?
> Thanks in anticpation
> Dave
>
>

Dunno about modifying them,but some of them will go a bit out of the
specified freq range,with a bit less gain/power output.
I have a 6W 420-450mhz module that works up past 467mhz,and still makes
4-5W output.

## 308. 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-14 20:51:57 UTC
From: jimmie68@gmail.com
Message-ID: <40f420a4-ef9f-4451-bba9-1450d5ada576@1g2000hsl.googlegroups.com>
Source record: 5545

I was thinking about using a UPS as a power supply for an amplifier. The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have tried powering an amp directly from the batteries and it seems to work OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is dead but the charger side is still functional. The plan is to remove the inverter circuit completely. Can anyone think of anything wrong with doing this.

JImmie

## 309. Re: Mitsubishi block madifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-14 20:55:56 UTC
From: jimmie68@gmail.com
Message-ID: <a41ad7f6-c2f8-4d52-899d-c25c904d9f68@u10g2000prn.googlegroups.com>
Source record: 5546

On Feb 13, 6:57 am, "Dave Bullock" <Da...@ihr.mrc.ac.uk> wrote:
> Hi Homebrewers,
> Has anyone ever seen information on modifing the innards of Mitsubishi
> M67730's.
> The top comes off really easily and the input and output filters (which have
> series inductors and caps to ground) seem to have several positions for
> fitting the capacitors as though the block is quite wideband and the filters
> set the bandpass.
> Just an idea that these 30 Watt 170MHz units may easily be moved down onto
> 2m?
> Has anyone attempted this?
> Thanks in anticpation
> Dave

Might be fun to install a compression type variable cap and see if you
could tune it. It shouldnt be too risky if you keep your drive low.

Jimmie

## 310. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-14 21:53:53 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <2e319f4b-0105-498f-a234-c24fd7ee47ae@37g2000hsl.googlegroups.com>
Source record: 5547

On Feb 14, 12:51 pm, jimmi...@gmail.com wrote:
> I was thinking about using a UPS as a power supply for an amplifier.
> The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have
> tried powering an amp directly from the batteries and it seems to work
> OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is
> dead but the charger side is still functional. The plan is to remove
> the inverter circuit completely. Can anyone think of anything wrong
> with doing this.
>
> JImmie

Do you plan on leaving the batteries in the unit? They act as a large
filter capacitor for the unit. If you take them out, you will need to
use some rather large filter capacitors to get anything close to DC.
If you have an oscilloscope, look at the waveform with the batteries
in place and with them disconnected. That will tell you how badly you
need filtering.

Good luck,
Paul KD7HB

## 311. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-14 22:49:09 UTC
From: jgboyles@aol.com
Message-ID: <b492804c-6d44-4a44-9eb6-b48282a6d12b@70g2000hsv.googlegroups.com>
Source record: 5548

On Feb 14, 2:51 pm, jimmi...@gmail.com wrote:
> I was thinking about using a UPS as a power supply for an amplifier.
> The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have
> tried powering an amp directly from the batteries and it seems to work
> OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is
> dead but the charger side is still functional. The plan is to remove
> the inverter circuit completely. Can anyone think of anything wrong
> with doing this.
>
> JImmie

It should work OK. The only problem I see is if the charger is not regulated. It probably is to keep the batteries from overcharging. I bet that baby is heavy.
I have found a 48 volt 20 amp supply that I use with my EB104 Amp that is about 8 lbs. The Amp itself is about 5 lbs., so I have 600 watts out in under 15 lbs. or .4 oz./watt.
The power supply is less than $300 USD including shipping. If you want more details, let me know.

73 Gary N4AST

## 312. Re: Mitsubishi block madifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-15 01:00:58 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <gv5tj.779$yk5.528@newsfe18.lga>
Source record: 5549

"Dave Bullock" <DaveB@ihr.mrc.ac.uk> wrote in message
news:foulv2$duk$1@oyez.ccc.nottingham.ac.uk...
> Hi Homebrewers,
> Has anyone ever seen information on modifing the innards of Mitsubishi
> M67730's.
> The top comes off really easily and the input and output filters (which
> have series inductors and caps to ground) seem to have several positions
> for fitting the capacitors as though the block is quite wideband and the
> filters set the bandpass.
> Just an idea that these 30 Watt 170MHz units may easily be moved down onto
> 2m?
> Has anyone attempted this?
> Thanks in anticpation
> Dave

Series inductors and caps to ground indicate a low pass filter. The
arrangement
sounds like a harmonic filter. You probably can go lower in frequency with
no
changes.

Pete k1zjh

>

## 313. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-15 04:49:38 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <h_qdnZCyvdtGhCjanZ2dnUVZ_qainZ2d@comcast.com>
Source record: 5550

Hey Pedro,

Could you please send me another copy of that article I sent
you.....I had to format my hard drive, and I lost that article.
Thanks!

Pete

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:d2Uij.22583$m6.7751@newsfe18.lga...
> Hey Pete
>
> Send the other Pete a copy...
>
> Tio Pedro
>
>

## 314. Heathkit HA Warrior

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-15 12:23:44 UTC
From: steve carey <scarey@tds.net>
Message-ID: <kvftj.42946$G23.13405@newsreading01.news.tds.net>
Source record: 5451

Looking for a HA 10 Heathkit Warrior any out there for sale Steve K9yk

## 315. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-15 16:26:32 UTC
From: Spamm Trappe <bit-bucket@config.com>
Message-ID: <slrnfrbf9o.2ode.bit-bucket@shell.config.com>
Source record: 5452

On Thu, 14 Feb 2008 22:49:38 -0600, Pete KE9OA wrote:
>
> Could you please send me another copy of that article I sent
> you.................I had to format my hard drive, and I lost that
> article.

Ahhh.... Another satisfied windoz user.

## 316. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-15 16:26:32 UTC
From: Clever Monkey <spamtrap@clevermonkey.org.INVALID>
Message-ID: <fp4eh9$h6c$2@aioe.org>
Source record: 5453

jimmie68@gmail.com wrote:
> I was thinking about using a UPS as a power supply for an amplifier.
> The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have
> tried powering an amp directly from the batteries and it seems to work
> OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is
> dead but the charger side is still functional. The plan is to remove
> the inverter circuit completely. Can anyone think of anything wrong
> with doing this.
>
Bear in mind that even with light use, the batteries will eventually
have to be replaced. APC, for example, rates their SOHO UPS devices
with replaceable batteries at 2-3 years between change-ups.

However, this is an excellent way of maintaining a decent shack when the
lights go out.
--
clvrmnky <mailto:spamtrap@clevermonkey.org>

Direct replies to this address will be blacklisted. Replace "spamtrap"
with my name to contact me directly.

## 317. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-15 17:08:03 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9A457145285CEVeebleFetzer@127.0.0.1>
Source record: 5454

bit-bucket@config.com (Spamm Trappe) wrote in
news:slrnfrbf9o.2ode.bit-bucket@shell.config.com:

> On Thu, 14 Feb 2008 22:49:38 -0600, Pete KE9OA wrote:
>>
>> Could you please send me another copy of that article I sent
>> you.....I had to format my hard drive, and I lost that
>> article.
>
> Ahhh.... Another satisfied windoz user.

Disk failure or corruption is unique to Windows?

Is there some magic in all other operating systems that prevents disk
failures?

--
Bert Hyman | St. Paul, MN | bert@iphouse.com

## 318. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 03:26:28 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <EJstj.873$we5.858@trnddc02>
Source record: 5455

"Bert Hyman" <bert@iphouse.com> wrote in message
news:Xns9A457145285CEVeebleFetzer@127.0.0.1...
> bit-bucket@config.com (Spamm Trappe) wrote in
> news:slrnfrbf9o.2ode.bit-bucket@shell.config.com:
>
>> On Thu, 14 Feb 2008 22:49:38 -0600, Pete KE9OA wrote:
>>>
>>> Could you please send me another copy of that article I sent
>>> you.....I had to format my hard drive, and I lost that
>>> article.
>>
>> Ahhh.... Another satisfied windoz user.
>
> Disk failure or corruption is unique to Windows?
>
> Is there some magic in all other operating systems that prevents disk
> failures?

Not necessarily, but Windows has been subject to an extreme amount of code
bloat, in comparison to some other OS's, which tends to make the effect of
any disk problem worse for Windows.
The problem is not the OS, it's the lack of backing up or making hardcopies
of data one wishes to save before the disk fails.

-NM

## 319. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 08:54:15 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <6L-dnYdixfoyOSvanZ2dnUVZ_gadnZ2d@comcast.com>
Source record: 5456

Neither of those issues is the problem. It was a virus. I regularly make DVD backups of all data whenever I format my hard drives, but in this case, I trusted that fact that I would be able to transfer all of my important data to my secondary (slave) hard drive.
Unfortunately, when I reinstalled Windows XP Pro, the crummy operating system didn't recognize my backup drive unless I formatted it. To make matters worse, the stupid, stupid, stupid Western Digital "Data Lifeguard" software would not mount my backup drive onto the system unless I reformatted that also. There was no option to configure my backup drive into the system unless I actually formatted it and lost all of my backup data. It looks like Western Digital is following Microsuck's footsteps. I should have transferred all of my important data either to a DVD or to my Linux system. Never again a Western Digital drive!
The fact remains though, that I still need a copy of that article from at least one of the 10 people that I was nice enough to forward it to. That would help me much more than the various "lectures" about what I should have done!

Pete

"Norm Mann" <folder0735@hotmail.com> wrote in message
news:EJstj.873$we5.858@trnddc02...
>
> "Bert Hyman" <bert@iphouse.com> wrote in message
> news:Xns9A457145285CEVeebleFetzer@127.0.0.1...
>> bit-bucket@config.com (Spamm Trappe) wrote in
>> news:slrnfrbf9o.2ode.bit-bucket@shell.config.com:
>>
>>> On Thu, 14 Feb 2008 22:49:38 -0600, Pete KE9OA wrote:
>>>>
>>>> Could you please send me another copy of that article I sent
>>>> you.....I had to format my hard drive, and I lost that
>>>> article.
>>>
>>> Ahhh.... Another satisfied windoz user.
>>
>> Disk failure or corruption is unique to Windows?
>>
>> Is there some magic in all other operating systems that prevents disk
>> failures?
>
> Not necessarily, but Windows has been subject to an extreme amount of code
> bloat, in comparison to some other OS's, which tends to make the effect of
> any disk problem worse for Windows.
> The problem is not the OS, it's the lack of backing up or making

> hardcopies of data one wishes to save before the disk fails.
>
> -NM
>
>
>

## 320. HAWK

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 09:15:28 UTC
From: Juka <juraj.slat@ka.htnet.hr>
Message-ID: <fp69e6$gfh$3@ss408.t-com.hr>
Source record: 5457

Need service manual for Rural Radio Telephone Link ,,,, Type H A W K -
Exicom International .
9A7KSJ

## 321. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 12:46:59 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <7XAtj.36086$yE1.35797@attbi_s21>
Source record: 5458

> Unfortunately, when I reinstalled Windows XP Pro, the crummy operating
> system didn't recognize my backup drive unless I formatted it. To make
> matters worse, the stupid, stupid, stupid Western Digital "Data Lifeguard"
> software would not mount my backup drive onto the system unless I
> reformatted that also. There was no option to configure my backup drive
> into the system unless I actually formatted it and lost all of my backup
> data. It looks like Western Digital is following Microsuck's footsteps. I
> should have transferred all of my important data either to a DVD or to my
> Linux system.
> Never again a Western Digital drive!
> The fact remains though, that I still need a copy of that article from at
> least one of the 10 people that I was nice enough to forward it to. That
> would help me much more than the various "lectures" about what I should
> have done!
>
> Pete

GM Pete. I recommend "Ghost" to make mirror bootable images of hard drives. Howsomever, I just got back from a week in FL with the kids. I have all the ARRL stuff back to 1914, tell me what you're looking for and will send it privately.

W4ZCB

## 322. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 14:53:37 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <47b6f8f0$0$1079$4c368faf@roadrunner.com>
Source record: 5459

"Clever Monkey" <spamtrap@clevermonkey.org.INVALID> wrote in message
news:fp4eh9$h6c$2@aioe.org...
> jimmie68@gmail.com wrote:
>> I was thinking about using a UPS as a power supply for an amplifier.
>> The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have
>> tried powering an amp directly from the batteries and it seems to work
>> OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is
>> dead but the charger side is still functional. The plan is to remove
>> the inverter circuit completely. Can anyone think of anything wrong
>> with doing this.
>>
> Bear in mind that even with light use, the batteries will eventually have
> to be replaced. APC, for example, rates their SOHO UPS devices with
> replaceable batteries at 2-3 years between change-ups.
>
> However, this is an excellent way of maintaining a decent shack when the
> lights go out.

I have some 100 amp/hr batteries, I was wondering if they might work with
the UPS charger.

Jimmie

## 323. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 18:37:05 UTC
From: Gerry <1321@yahoo.co.uk>
Message-ID: <47b72d52$1_1@mk-nntp-2.news.uk.tiscali.com>
Source record: 5460

Jimmie D wrote:
> "Clever Monkey" <spamtrap@clevermonkey.org.INVALID> wrote in message
> news:fp4eh9$h6c$2@aioe.org...
>> jimmie68@gmail.com wrote:
>>> I was thinking about using a UPS as a power supply for an amplifier.
>>> The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have
>>> tried powering an amp directly from the batteries and it seems to work
>>> OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is
>>> dead but the charger side is still functional. The plan is to remove
>>> the inverter circuit completely. Can anyone think of anything wrong
>>> with doing this.
>>>
>> Bear in mind that even with light use, the batteries will eventually have
>> to be replaced. APC, for example, rates their SOHO UPS devices with
>> replaceable batteries at 2-3 years between change-ups.
>>
>> However, this is an excellent way of maintaining a decent shack when the
>> lights go out.
>
> I have some 100 amp/hr batteries, I was wondering if they might work with
> the UPS charger.
>
> Jimmie
>
>
I use a small APC UPS in the outdoor shack with a 110Ah camping battery,
the small charger works OK but does take a few days to recharge. I added
a small fan to the heat sink of the inverter as it tends to get a bit
hot. The chargers need a battery connected as a load as they are not
pure DC.

Gerry....

## 324. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 20:24:38 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <l7KdnZQierXj2yranZ2dnUVZ_sCtnZ2d@comcast.com>
Source record: 5461

Thanks Harold.....that would be super. I do have Norton Ghost, but unfortunately if I imaged the data from my C drive to my D drive, I would also have imaged the virus.
Thanks again!

Pete

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message news:7XAtj.36086$yE1.35797@attbi_s21...
>
>> Unfortunately, when I reinstalled Windows XP Pro, the crummy operating
>> system didn't recognize my backup drive unless I formatted it. To make
>> matters worse, the stupid, stupid, stupid Western Digital "Data
>> Lifeguard" software would not mount my backup drive onto the system
>> unless I reformatted that also. There was no option to configure my
>> backup drive into the system unless I actually formatted it and lost all
>> of my backup data. It looks like Western Digital is following Microsuck's
>> footsteps. I should have transferred all of my important data either to a
>> DVD or to my Linux system.
>> Never again a Western Digital drive!
>> The fact remains though, that I still need a copy of that article from at
>> least one of the 10 people that I was nice enough to forward it to. That
>> would help me much more than the various "lectures" about what I should
>> have done!
>>
>> Pete
>
> GM Pete. I recommend "Ghost" to make mirror bootable images of hard
> drives. Howsomever, I just got back from a week in FL with the kids. I
> have all the ARRL stuff back to 1914, tell me what you're looking for and
> will send it privately.
>
> W4ZCB
>

## 325. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 21:09:37 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <RJKdnV1Dv5-XzCranZ2dnUVZ_q2hnZ2d@comcast.com>
Source record: 5462

A couple of folks were nice enough to send me that article. Thanks folks!

Pete

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:7XAtj.36086$yE1.35797@attbi_s21...
>
>> Unfortunately, when I reinstalled Windows XP Pro, the crummy operating
>> system didn't recognize my backup drive unless I formatted it. To make
>> matters worse, the stupid, stupid, stupid Western Digital "Data
>> Lifeguard" software would not mount my backup drive onto the system
>> unless I reformatted that also. There was no option to configure my
>> backup drive into the system unless I actually formatted it and lost all
>> of my backup data. It looks like Western Digital is following Microsuck's
>> footsteps. I should have transferred all of my important data either to a
>> DVD or to my Linux system.
>> Never again a Western Digital drive!
>> The fact remains though, that I still need a copy of that article from at
>> least one of the 10 people that I was nice enough to forward it to. That
>> would help me much more than the various "lectures" about what I should
>> have done!
>>
>> Pete
>
> GM Pete. I recommend "Ghost" to make mirror bootable images of hard
> drives. Howsomever, I just got back from a week in FL with the kids. I
> have all the ARRL stuff back to 1914, tell me what you're looking for and
> will send it privately.
>
> W4ZCB
>

## 326. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-16 23:06:00 UTC
From: Denton <denton@oregontrail.net>
Message-ID: <13rer2mh72lbr08@corp.supernews.com>
Source record: 5463

Well I have a Cyberpower 3000 sine wave output ups in the basement fed with two banks of 4 12 vdc 38 amp hr Hawker absorpion gas mat batteries wired in series...The ups specifies 48 vdc battery banks, normally of much smaller capacity. It just takes a long time to get the batteries charged.
Works perfectly well for me!
One think I did do is build a Faraday shield out some aluminum screening over the Cyberpower ups and the battery pack, gounded to an 8' ground rod thru the basement wall to keep the inverter noise out of the hf rigs.
The Cyberpower feeds the radio station's power supplys and the pc on the main floor thru a dedicated ac outlet.

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:47b6f8f0$0$1079$4c368faf@roadrunner.com...
>
> "Clever Monkey" <spamtrap@clevermonkey.org.INVALID> wrote in message
> news:fp4eh9$h6c$2@aioe.org...
>> jimmie68@gmail.com wrote:
>>> I was thinking about using a UPS as a power supply for an amplifier.
>>> The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have
>>> tried powering an amp directly from the batteries and it seems to work
>>> OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is
>>> dead but the charger side is still functional. The plan is to remove
>>> the inverter circuit completely. Can anyone think of anything wrong
>>> with doing this.
>>>
>> Bear in mind that even with light use, the batteries will eventually have
>> to be replaced. APC, for example, rates their SOHO UPS devices with
>> replaceable batteries at 2-3 years between change-ups.
>>
>> However, this is an excellent way of maintaining a decent shack when the
>> lights go out.
>
> I have some 100 amp/hr batteries, I was wondering if they might work with
> the UPS charger.
>
> Jimmie
>

## 327. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-17 19:26:11 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <47b88a51$0$30673$4c368faf@roadrunner.com>
Source record: 5464

"Denton" <denton@oregontrail.net> wrote in message
news:13rer2mh72lbr08@corp.supernews.com...
> Well I have a Cyberpower 3000 sine wave output ups in the basement fed
> with two banks of 4 12 vdc 38 amp hr Hawker absorpion gas mat batteries
> wired in series...The ups specifies 48 vdc battery banks, normally of much
> smaller capacity. It just takes a long time to get the batteries charged.
> Works perfectly well for me!
> One think I did do is build a Faraday shield out some aluminum screening
> over the Cyberpower ups and the battery pack, gounded to an 8' ground rod
> thru the basement wall to keep the inverter noise out of the hf rigs.
> The Cyberpower feeds the radio station's power supplys and the pc on the
> main floor thru a dedicated ac outlet.
>
> "Jimmie D" <GFENDER@carolina.rr.com> wrote in message
> news:47b6f8f0$0$1079$4c368faf@roadrunner.com...
>>
>> "Clever Monkey" <spamtrap@clevermonkey.org.INVALID> wrote in message
>> news:fp4eh9$h6c$2@aioe.org...
>>> jimmie68@gmail.com wrote:
>>>> I was thinking about using a UPS as a power supply for an amplifier.
>>>> The UPS is rated at over 2KW and uses 48 volts on the DC bus. I have
>>>> tried powering an amp directly from the batteries and it seems to work
>>>> OK. Battery pack is rate at 20 amp/hr. The inverter side of the UPS is
>>>> dead but the charger side is still functional. The plan is to remove
>>>> the inverter circuit completely. Can anyone think of anything wrong
>>>> with doing this.
>>>>
>>> Bear in mind that even with light use, the batteries will eventually
>>> have to be replaced. APC, for example, rates their SOHO UPS devices
>>> with replaceable batteries at 2-3 years between change-ups.
>>>
>>> However, this is an excellent way of maintaining a decent shack when the
>>> lights go out.
>>
>> I have some 100 amp/hr batteries, I was wondering if they might work with
>> the UPS charger.
>>
>> Jimmie
>>
>
>

Last night I hooked up the 4 100 amp hour batteries to the inverter and it
shut down. Appararently it has some type of overcurrent protection. So I

hooked my big auto shop station type battery charger up to them and let them charge over night. This AM when I connected the batteries to the inverter it just hummed right along. It appears that as long as I dont let the batteries get severly discharged I will be OK.

Jimmie

## 328. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-17 22:34:59 UTC
From: clifto <clifto@gmail.com>
Message-ID: <jdpm85-d2a.ln1@remote.clifto.com>
Source record: 5465

Jimmie D wrote:
> Last night I hooked up the 4 100 amp hour batteries to the inverter and it
> shut down. Appararently it has some type of overcurrent protection. So I
> hooked my big auto shop station type battery charger up to them and let them
> charge over night. This AM when I connected the batteries to the inverter it
> just hummed right along. It appears that as long as I dont let the batteries
> get severly discharged I will be OK.

In other words, as long as you don't use the extra capacity you got those batteries for.

--
B. Hussein Obama won't wear an American flag on his lapel, or put his hand over his heart during the national anthem, but prominently displayed in his Houston campaign office are TWO Cuban flags, each with a picture of Che Guevara superimposed on it.

## 329. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-18 03:31:53 UTC
From: PhattyMo <PhattyMo@nospam.gmail>
Message-ID: <47b8fb83$0$512$815e3792@news.qwest.net>
Source record: 5466

clifto wrote:
> Jimmie D wrote:
>> Last night I hooked up the 4 100 amp hour batteries to the inverter and it
>> shut down. Appararently it has some type of overcurrent protection. So I
>> hooked my big auto shop station type battery charger up to them and let them
>> charge over night. This AM when I connected the batteries to the inverter it
>> just hummed right along. It appears that as long as I dont let the batteries
>> get severly discharged I will be OK.
>
> In other words, as long as you don't use the extra capacity you got those
> batteries for.
>

I think you'd be better off building/buying a 48V battery charger.
The little charger in the UPS is usually a trickle-charger type,and as
you found out,doesn't like bigger loads much.

Say you hit the PTT on your favorite rig,and the voltage dips a bit
-perhaps below the UPS chargers "happy point" and it throws a fit while
you're on the air.

## 330. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-18 22:32:34 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <2uydnWPgtMjRmifanZ2dneKdnZydnZ2d@pipex.net>
Source record: 5467

> Hi I need to building a 4 ohm 1500 watt "cantenna paint can style" dummy
> load for audio and guitar amp work. I have forgotten what type of oil to use
> for heat transfer.
> Id like something easy to get (like peanut or something with a high
> flashpoint).
> Don't want to loose the house.
==========
Assuming a resistance wire load made from thick galvanised fencing wire
( freq is low ;no RF) carrying up to sqrt 1500/4 equals approx 20
amperes , I would just use a large paint can filled with motor oil.

The 2 dummy load connections can be best made with heavy duty insulated
panel sockets with screwed head to be fitted in the can's lid. The stiff
resistance element can be fitted unsupported and kept free from the can

I also use motor oil for RF dummy loads with metal oxyde resistors and
over the years the resistance hasn't changed.

To prevent the oil filled (paint)can 'weeping' oil it is important that
the can's vertical and bottom seals are tight by applying solder inside.
Depending on the type and duration of testing ,the heat capacity of the
dummy load can be increased by placing the lower part of the can in
(flowing) cold water.
The can's lid should have a small vent hole (1-2 mm)

Frank GM0CSZ / KN6WH

## 331. Re: 48 volt power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-18 22:42:48 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <47ba09e6$0$1087$4c368faf@roadrunner.com>
Source record: 5468

"PhattyMo" <PhattyMo@nospam.gmail> wrote in message
news:47b8fb83$0$512$815e3792@news.qwest.net...
> clifto wrote:
>> Jimmie D wrote:
>>> Last night I hooked up the 4 100 amp hour batteries to the inverter and
>>> it shut down. Appararently it has some type of overcurrent protection.
>>> So I hooked my big auto shop station type battery charger up to them and
>>> let them charge over night. This AM when I connected the batteries to
>>> the inverter it just hummed right along. It appears that as long as I
>>> dont let the batteries get severly discharged I will be OK.
>>
>> In other words, as long as you don't use the extra capacity you got those
>> batteries for.
>>
>
>
>
> I think you'd be better off building/buying a 48V battery charger.
> The little charger in the UPS is usually a trickle-charger type,and as you
> found out,doesn't like bigger loads much.
>
> Say you hit the PTT on your favorite rig,and the voltage dips a
> bit -perhaps below the UPS chargers "happy point" and it throws a fit
> while you're on the air.
>

Well the amp won't key and my signal will drop a few db. How bad can that
be?
Ive had worse things happen than that but doubt if there is much of a
chance.
I could run max power for a couple of hours on just the batteries but these
are BIG batteries and they were nearly stone dead when I hooked them up. I
doubt if I will have that problem again. Heck the thing is rated at 2.5 KVA
BEst of all it and the batteries were free.

Jimmie

Jimmie

## 332. Re: desoldering advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-18 22:55:02 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <B_qdnZlw3dQNkSfanZ2dneKdnZydnZ2d@pipex.net>
Source record: 5469

David Rowell wrote:
> Would you nice folks point me to a good how-to on desoldering?
==========
I am using both a Radio Shack 45W soldering iron with heated sucker head with suction bellows ,cat no 64-2060B and a similar heated device with integral spring loaded suction piston . Both work well and are low cost.

Frank GM0CSZ / KN6WH

## 333. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-19 23:31:33 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <47bb66d2$0$16684$4c368faf@roadrunner.com>
Source record: 5470
Body handling: HTML body converted to readable text

"Pete KE9OA" wrote in message
news:6L-dnYdixfoyOSvanZ2dnUVZ_gadnZ2d@comcast.com...
> Neither of those issues is the problem. It was a virus. I regularly make
> DVD backups of all data whenever I format my hard drives, but in this
> case, I trusted that fact that I would be able to transfer all of my
> important data to my secondary (slave) hard drive.
> Unfortunately, when I reinstalled Windows XP Pro, the crummy operating
> system didn't recognize my backup drive unless I formatted it. To make
> matters worse, the stupid, stupid, stupid Western Digital "Data Lifeguard"
> software would not mount my backup drive onto the system unless I
> reformatted that also. There was no option to configure my backup drive
> into the system unless I actually formatted it and lost all of my backup
> data. It looks like Western Digital is following Microsuck's footsteps. I
> should have transferred all of my important data either to a DVD or to my
> Linux system.
> Never again a Western Digital drive!
> The fact remains though, that I still need a copy of that article from at
> least one of the 10 people that I was nice enough to forward it to. That
> would help me much more than the various "lectures" about what I should
> have done!

Convert the hard drive to an external USB drive. adapters can be had for
about $10

Jimmie

## 334. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-20 14:01:04 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <P8-dnRKnbu74ryHaRVnyhQA@pipex.net>
Source record: 5471

>> To prevent the oil filled (paint)can 'weeping' oil it is important that
>> the can's vertical and bottom seals are tight by applying solder inside.
---
> That hasn't been my experience, but if one must solder, for sure don't
> use a lined can. And then after soldering, clean and apply a
> protective coating on the outside to cover all areas where heat has
> discolored the metal... because these areas will be far more prone to
> rust.
==========
It is hardly possible that rust develops when the can is filled with
(any) oil.
Another way to prevent oil weeping from the can is to cover the seams
internally with 2 component-expoxy adhesive.I had a motor oil filled
dummy load in operation for 15 years without problems , resistance
measured remained constant (50.3 Ohms) over that period.
That dummy load was made with 20 ea 1000 Ohms ,2Watt carbon film
resistors. With so many resistors in parallel the inductance of the
device is sufficiently low for use up to VHF frequencies.

Frank GM0CSZ / KN6WH

## 335. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-20 14:40:29 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <d6mdnRWL7fw-piHanZ2dnUVZ8uGdnZ2d@pipex.net>
Source record: 5472

> On Feb 4, 10:13 pm, Leon <leon...@btinternet.com> wrote:
>> On 28 Jan, 11:27, "Richard" <nearlynews_em...@ntlworld.com> wrote:
>>
>>> I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU feeding
>>> 24V @ about 300mA.
>>> Are switch-mode powers supplies alright or are they too noisy to be used for
>>> receivers? TIA.
>> I use a 12V switcher with my FT-817D, it's very quiet.
>>
>> Leon
>
> You were lucky - you got a quiet one. And its the luck of the draw,
> unfortunately.
>
> How come we have all been conned into these switchmode things? - by
> their very nature, without a lot of effort, they are noise generators.
> Their cheap to make, thats their only advantage - everything else is
> part of the spin cycle. And if it works on 2m and above, fine - you
> will just be adding to the already horrendous RF pollution from
> thousands of the bloody things already on HF - the suburbs are getting
> unbearable, S9 plus noise, every night, on 80m.....160 aint to crash
> hot either...
>
> I refuse to have to work on a power supply to get it quiet enough to
> be used with a radio. I am interested in the radio, not fixing
> shortcomings in design of things that , by their very nature, are
> unsuitable to be used near radios. That sucks. Linear technology is
> far easier and quieter...
==========
When using a switcher (in a metal sealed enclosure and with noise
supressors ,as recommended by some in this thread), put a sealed lead
acid battery in parallel.
If still noisy you then can switch-off switcher when rx-ing .

Frank GM0CSZ / KN6WH

## 336. Radio Shack DX-394 Users Group - 1200+ Members

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-20 15:40:34 UTC
From: Tom <holden_family@sympatico.ca>
Message-ID: <fd29d9b9-d7c1-4acd-85ca-f94ab7acc6b7@i29g2000prf.googlegroups.com>
Source record: 5473
Cross-posted to:
rec.radio.shortwave,alt.radio.scanner,alt.radio.scanner.uk,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

This group has the most complete collection of modifications, usage tips, links to related websites, documentation, and photos along with a user survey and a message forum (5000+ messages archived) to help you get the most fun and DX out of your Realistic / Radio Shack DX-394, DX394, DX 394 LW/MW/SW scanning receiver.

About 100 mods and tips now listed - more mods than for any other general coverage receiver! Thoroughly documented with a Master Index. If you like to tinker with radios, I know of no other recent model that lends itself to as much fun in this arena as the DX-394. Great platform for learning radio-electronics. Always 1 or more FA on eBay.

Active & friendly user community now with over 1200 members. Some members are
keen short wave listeners; some are hams; some are into MW/AM DXing and a few enjoy long wave. Many experiment with antennas and some are ardent modifiers - customising and souping up the rig as hot rodders would do with cars. You'll find lots to interest you and help get the most out of your radio as propagation improves over the coming years.

All here at:
http://groups.yahoo.com/group/RADIOSHACKDX394/<http://groups.yahoo.com/group/RADIOSHACKDX394/>

Subscribe on line at the website (for full access privileges to the extensive collection of Files, Photos and Links),

or by email:
RADIOSHACKDX394-subscribe@yahoogroups.com (for message posting/ receipt only).

73, Tom

## 337. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-20 17:58:18 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <0TZuj.15952$Gv.7396@en-nntp-07.dc1.easynews.com>
Source record: 5474

>> How come we have all been conned into these switchmode things? - by
>> their very nature, without a lot of effort, they are noise generators.
>> Their cheap to make, thats their only advantage - everything else is
>> part of the spin cycle.

Other advantages include much better power efficiency and much lower weight.

It's not particularly difficult to make a switcher with very good (meaning
very little) noise output, but relatively few applications call for it, and
given how incredibly competitive the power supply arena is, it's not
surprising that a lot of companies drop a few components to reduce their costs
at the expense of noise.

## 338. Re: Cantenna dummyload oil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-20 20:37:37 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <47bc8f8d$0$7011$4c368faf@roadrunner.com>
Source record: 5475

"Jim Higgins" <invalid@invalid.invalid> wrote in message
news:uvgor35l6omdpk9ajnvkbrearoji2ok2se@4ax.com...
> On Wed, 20 Feb 2008 14:01:04 +0000, Highland Ham
> <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote:
>
>>>> To prevent the oil filled (paint)can 'weeping' oil it is important that
>>>> the can's vertical and bottom seals are tight by applying solder
>>>> inside.
>>>>------------
>>> That hasn't been my experience, but if one must solder, for sure don't
>>> use a lined can. And then after soldering, clean and apply a
>>> protective coating on the outside to cover all areas where heat has
>>> discolored the metal... because these areas will be far more prone to
>>> rust.
>>>==========
>>It is hardly possible that rust develops when the can is filled with
>>(any) oil.
>
>
> I believe I said "on the OUTSIDE..." Oh, look, I did. ;-)

I would think rust developing on outside the can wouldnt be much of a
problem unless you tend to let things set for 10 years or so without ever
looking at them.

Jimmie

## 339. Re: April 1977 QST article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-20 22:56:10 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <UKGdnZvPLZdSMiHanZ2dnUVZ8q6onZ2d@pipex.net>
Source record: 5476

> Could you please send me another copy of that article I sent
> you.................I had to format my hard drive, and I lost that article.
> Thanks!
>
> Pete
================
Pete , I thought you were a Linux user......;))

Frank GM0CSZ / KN6WH

## 340. 100 pages of videos

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-21 03:24:33 UTC
From: WillWeav@gmail.com
Message-ID: <5cf7f5c9-7c63-4a24-baf9-19c5dfa07c37@n58g2000hsf.googlegroups.com>
Source record: 5477

I posted a message earlier that I had added 100 pages of ham related
videos to my website but failed to include the link to the website,
anyway here is the link, come on by and visit:
http://www.amateurradios.info

Thanks to those that have already visited, come back for more.

73's everyone

Bill W5GRX

## 341. Cheap Muscle wire to turn antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-22 20:47:04 UTC
From: Larry Snyder <lsnyder@pacific.net>
Message-ID: <13rud6al72un905@corp.supernews.com>
Source record: 5478

http://cgi.ebay.com:80/ws/eBayISAPI.dll?ViewItem&item=330214235548&ssPageName=ADME:L:LCA:US:1123

## 342. Best electronics product!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-25 15:46:01 UTC
From: suzannehoes@gmail.com
Message-ID: <6fb046b2-5598-4d6c-a916-abd1736f1800@s12g2000prg.googlegroups.com>
Source record: 5479

Hi friends:
Welcome to shopping on our website! Free shipping.
http://www.electronics-made-china.com
In order to celebrate our company's thrid years anniversary and the
successful updating of our website, we have speical presents for
buyers From February 12-30!

Free Apple MP3 for All Deals.
For Deals Over $200, an Extra 10% discount for You!

20GB Apple MP3 for any buyers; View 20GB(Black or white)
30GB Apple MP3 for who purchase over $1000; View 30GB(Black or white)
40GB Apple MP3 for who purchase over $2000; View 40GB(Black or white)
60GB Apple MP3 for who purchase over $3000; View 60GB(Black or white)
80GB Apple MP3 for who purchase over $5000; View 80GB(Black or white)

We are a large wholesaler mainly selling electrical product,

We buy exclusively from Chinese manufacturers who produce Digital
Cameras，DJ Equipment, Electric guitars, Game console, GPS, Laptops,
Mobile Phone, Motorcycles, Mp3, Mp4, Road Bikes, TVs & HDTVs.

The quality of our products is the best, our service is perfect, and
our price is the best, the speed of our shipping is very fast.

We have our own warehouse and stores, we have clients all over the
world, and we have been received very high praise from our customers.

If you have some suggestions about our products or our service, please
tell us, and we must accept and improve, and appreciate you very much.
We hope we can cooperate happily in the long term.

Our belief: Credit is the first, customers are our God.

7*24 hour On-line service:
MSN : E-made-china[AT]hotmail.com
Email:E-made-china[AT]hotmail.com

Website Homepage:
http://www.electronics-made-china.com

# 343. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-25 15:59:03 UTC
From: Dave <dspear99ca@yahoo.com>
Message-ID: <bBBwj.58078$C61.44082@edtnps89>
Source record: 5480
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

<mad.scientist.jr@gmail.com> wrote in message
news:7c0ed491-3cdb-4549-a43d-330cf4e13815@s12g2000prg.googlegroups.com...
>I would like to build an analog volume meter (moving needle type)
> using moving needle gauges like this
> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
> scavenged from a dead mixer's VU meter.
>
> It would plug into the headphone jack on a set of computer speakers
> and monitor the right/left sound volumes independently.
>
> Can anyone point me to a good website or book with schematics or plans
> on building this?
>
>
> PS I would also be interested in building a frequency meter (also
> would be plugged into computer speakers and display the pitch/
> frequency of a pure sin wave coming from the computer's sound card). I
> got several replies but they were pretty technical and I have not
> found any complete plans for such a device. If any can suggest a good
> web site or book that would be great. Thanks
>
>
>>BobG:
> That's a tachometer. A lo pass filter, a comparator, a oneshot, a
> capacitor, and a meter on a trimpot. Every zero crossing, the
> comparator fires the oneshot, the cap integrates the pulses, and the
> meter shows the freq. Cal it with sine waves.... no harmonics.
>
> linnix:
> Or a $2 micro averaging the DCT, FFT or XYZ (forgot the name of that
> spectral analyser).
>
> whit3rd:
> Phase-lock loops like 74HC4046 can lock onto an audio
> frequency, and the follower in it has an output voltage
> proportional to frequency. That's about $0.60 from your budget;
> a good analog moving-needle meter will suck up the rest of it.
>

test

# 344. Re: seeking schematics or plans to build a stereo analog volume meter (to plug into pc speaker headphone jack)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-26 01:54:42 UTC
From: sycochkn <sycochkn@earthlink.net>
Message-ID: <13s6rvca6mbqb76@corp.supernews.com>
Source record: 5481
Cross-posted to: rec.audio.pro,sci.electronics.equipment,rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.design

"Dave" <dspear99ca@yahoo.com> wrote in message
news:bBBwj.58078$C61.44082@edtnps89...
>
> <mad.scientist.jr@gmail.com> wrote in message
> news:7c0ed491-3cdb-4549-a43d-330cf4e13815@s12g2000prg.googlegroups.com...
>>I would like to build an analog volume meter (moving needle type)
>> using moving needle gauges like this
>> http://en.wikipedia.org/wiki/Image:VU_Meter.jpg
>> scavenged from a dead mixer's VU meter.
>>
>> It would plug into the headphone jack on a set of computer speakers
>> and monitor the right/left sound volumes independently.
>>
>> Can anyone point me to a good website or book with schematics or plans
>> on building this?
>>
>>
>> PS I would also be interested in building a frequency meter (also
>> would be plugged into computer speakers and display the pitch/
>> frequency of a pure sin wave coming from the computer's sound card). I
>> got several replies but they were pretty technical and I have not
>> found any complete plans for such a device. If any can suggest a good
>> web site or book that would be great. Thanks
>>
>>
>>>BobG:
>> That's a tachometer. A lo pass filter, a comparator, a oneshot, a
>> capacitor, and a meter on a trimpot. Every zero crossing, the
>> comparator fires the oneshot, the cap integrates the pulses, and the
>> meter shows the freq. Cal it with sine waves.... no harmonics.
>>
>> linnix:
>> Or a $2 micro averaging the DCT, FFT or XYZ (forgot the name of that
>> spectral analyser).
>>
>> whit3rd:
>> Phase-lock loops like 74HC4046 can lock onto an audio
>> frequency, and the follower in it has an output voltage
>> proportional to frequency. That's about $0.60 from your budget;
>> a good analog moving-needle meter will suck up the rest of it.
>>
>

> test
>

A crystal controlled monostable multivibrator driving an analog meter. that is more like 10 bucks without the meter. It can be calibrated without an input signal. or by inputting a signal beyond its range.

Bob

Bob

## 345. Udomain Zen Internet launches new managed security service

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-29 04:34:04 UTC
From: wchost <website-solution@yahoo.com>
Message-ID: <1127aabfe93f1f7569df7e6e5cc4c746@localhost.talkaboutradio.com>
Source record: 5482

Udomain Zen Internet launches new managed security service

---

Udomain Zen Internet, a multi-award winning Internet Service Provider (ISP), has today launched a comprehensive Managed Security service to meet the needs of its rapidly growing base of business customers.

Based upon Fortinets award winning Unified Threat Management appliances, Udomain Zens Managed Security customers will benefit from a range of services including network security consultation and design, 24 x 7 network monitoring, monthly firewall activity reports and on-going support from a dedicated support team. Udomain Zens Managed Security service is backed up with a Service Level Agreement and allows both small and large companies to focus on their business safe in the knowledge that their network is protected from a range of Internet threats.

Security has become increasingly important to our customers, particularly with the rise of e-commerce and online operations, said Justin Barritt, Product Manager at Udomain Zen Internet. Our decision to develop a Managed Security solution is based upon the needs of our customers who are struggling to protect their networks against a growing range of Internet threats. Smaller businesses dont have the resources to make someone solely responsible for security whilst larger businesses can call upon our managed security provisions when their security needs become increasingly complex.

He continued: The range of Fortinets Unified Threat Management devices provide our customers with advanced AV scanning, content filtering, firewall and anti-spam capabilities. Fortinets multi-threat security offerings allow our customers to meet all their current security requirements whilst also being able to satisfy future business security needs.

Our alliance with Udomain Zen Internet further underlines how Fortinets UTM platform is ideally suited to the Managed Security Market, said Jonathan Mepsted, regional director Fortinet UK, Ireland and South Africa. The protection offered by FortiGate devices allows Udomain Zen to provide its customers with a proactive service - Udomain Zens investment in Fortinets FortiManager management consoles also enable them to make quick changes to customers security policies and facilitate detailed reporting on a range of blocked threats.

About Udomain Zen Internet:
Established in 2001, and one of the first ISPs in the UK, Udomain Zen Internet provides a full range of high quality services to the home and business user, from the latest in high speed DSL Broadband Internet access

and complete hosting packages to state of the art Web site design and e-commerce solutions. Udomain Zen Internet won three awards in the 2006 ISPAs (Internet Service Providers' Association) in the categories of Best Uncontended Service, Best Heavy Business Broadband and Best Business ISP. These followed an ISPA Best Light Business Broadband award in 2005 and the PC Pro Best ISP Broadband awards in 2004 and 2005.
http://www.ec2biz.com/en/section-knowledge/support.aspx

About Fortinet:
Fortinet is the confirmed leader of the Unified Threat Management security appliance market. The company's award-winning FortiGate series of ASIC-accelerated multi-threat security appliances, winner of the 2004 Security Product of the Year Award from Network Computing magazine and the 2003 Networking Industry Awards Firewall Product of the Year, are the new generation of real-time network protection systems. They detect and eliminate the most damaging, content-based threats from e-mail and Web traffic such as viruses, worms, intrusions, inappropriate Web content and more in real time - without degrading network performance. Fortinet's solutions are the only security products that are certified eight times over by the ICSA (firewall, antivirus, IPSec, SSL, IDS, client antivirus detection, cleaning and antispyware), and deliver a full range of network-level and application-level services in integrated, easily managed platforms. Named a Light Reading Top 10 Private Company and #4 on Silicon Valley/San Jose Business Journals Fast 50 list, Fortinet is privately held and based in Sunnyvale, California.

--
Message posted using http://www.talkaboutradio.com/group/rec.radio.amateur.homebrew/
More information at http://www.talkaboutradio.com/faq.html

## 346. Calculate RF / Electronic Equations Online & Subscribe FREE magazines

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-02-29 07:24:35 UTC
From: EngineerEDGE <calculatoredge@gmail.com>
Message-ID: <85bbc04c-96a1-4062-9e21-eff024d67ad5@s13g2000prd.googlegroups.com>
Source record: 5483

Hello Friends,

Check this website www.calculatoredge.com you will find several RF &
Microwave Calculator Tool, you do not need to learn the formula to
solve the equations, if you have inputs then you can just enter into
and get the equations solved.

You also get free magazine subscription on this website, I guess it is
useful

Tom

# 347. FOR SALE-EMERSON Bakelite-TELE-TONE mod.145-RCA VICTOR mod.45-1-2, all for $50 lot-fix/parts/restore

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-03 13:16:08 UTC
From: "Dwight D. Eisenhower" <rottedHonda@yahoo.com>
Message-ID: <601d4a0b-6358-4bbf-9b67-3bb328d0f500@u69g2000hse.googlegroups.com>
Source record: 5484

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&rd=1&item=140212381570&ssPageName=STRK:MESE:IT&ih=004

LOT OF (3) OLD AM TUBE RADIOS AND PHONOGRAPH-MONO-USE FOR PARTS OR REPAIR- LIST:

EMERSON BAKELITE AM RADIO-CRACKED CASE (CAN BE GLUED), MISSING BACK PANEL, OTHERWISE COMPLETE WITH ALL TUBES, SPEAKER, ANTENNA, KNOBS, FRONT DIAL/GLASS

TELE-TONE MODEL 145 AC/DC PORTABLE TUBE RADIO-WORKED ON HOUSE WALL CURRENT OR BATTERIES- NO KNOBS- WOODEN CASE APART- OTHERWISE COMPLETE WITH FRONT PANEL, BACK PANEL, ALL TUBES, BATTERY CONNECTIONS

RCA VICTOR MODEL 45-1-2 PHONOGRAPH, PLAYED MONO 45 RPM 7" RECORDS, COMPLETE WITH RCA OUTPUT CORD

# 348. FA: MORE ANTIQUE CATALOGS/PAPER +

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-03 17:55:03 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <XXWyj.276339$MJ6.26036@bgtnsc05-news.ops.worldnet.att.net>
Source record: 5485

Just listed: SAM'S , THORDARSON (AMATEUR + XFMR), ALLIED, UTC, STANCOR,:
MORE ARE COMING IN THE NEXT FEW DAYS,

Why go for a copy when originals are available:??

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

How about a look at some of my antique radios I will be listing in the
furture: see at:

www.facebook.com/album.php?aid=2000463&l=c8e18&id=1110063202

Tnx, Heytubeguy

## 349. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-05 06:20:58 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <e78cca3b-8849-415f-ae17-2702c1adc792@i7g2000prf.googlegroups.com>
Source record: 5486

On Feb 21, 4:58 am, "Joel Koltner" <zapwireDASHgro...@yahoo.com>
wrote:
> >> How come we have all been conned into these switchmode things? - by
> >> their very nature, without a lot of effort, they are noise generators.
> >> Their cheap to make, thats their only advantage - everything else is
> >> part of the spin cycle.
>
> Other advantages include much better power efficiency and much lower weight.
>
> It's not particularly difficult to make a switcher with very good (meaning
> very little) noise output, but relatively few applications call for it, and
> given how incredibly competitive the power supply arena is, it's not
> surprising that a lot of companies drop a few components to reduce their costs
> at the expense of noise.

re power and weight - I was having a rant, so deliberately left out
the inconvenient facts.....(Yes, I thats unusual, isnt it - I must
reprimand myself)

And yes, will readily concede the " they can be well designed bit"...

But they are not. The percentage? - dont know. All I can do is hear
them, on air. Went away at Xmas, remote caravan park, MILES away,
looking forward to HF radio . Nope, surrounded by modern caravans with
12v systems, run from noisy SMPS power supplies/battery chargers....it
was better, 80m QRM was S3 instead of S9+

Gosh, modern electronics IS wonderful, isnt it....

My point stands.

Andrew VK3BFA.

## 350. Re: Are switch-mode powers supplies suitable for receivers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-05 09:31:19 UTC
From: numeric <numeric@att.net>
Message-ID: <HLtzj.281011$MJ6.171168@bgtnsc05-news.ops.worldnet.att.net>
Source record: 5487

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:605sh6F1ppo43U1@mid.individual.net...
> I have an ex AM PMR radio that I wish to use on 144Mhz. I need a PSU
feeding
> 24V @ about 300mA.
>
> Are switch-mode powers supplies alright or are they too noisy to be used
for
> receivers? TIA.
>

Many years ago I designed a switching power supply for aircraft Nav and Com VHF radios. The switcher was 100% shielded and line filtered to get the radio to pass FCC and FAA TSO certification. Even though the Com and Nav radio's are VHF, they were placed next to an ADF radio (low frequency) without problems. Testing was performed not only for electro magnetic emissions, but also for line current emissions, with a line stabilization network, into the radio from the aircraft power. Even if the switcher is 100% shielded, this will not prevent radiation along the input power line. You need to consider methods to eliminate pulsed current along the input power line caused by the switcher. This may be hard to achieve, especially for high efficiency switchers. A good choke will help, but it will also introduce additional switching losses. So yes, a switcher can be used; but, IMHO it must be designed for use in an RF environment.

## 351. I love this :-)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-05 14:22:19 UTC
From: roses.susan3@gmail.com
Message-ID: <b899c997-285e-4c83-8569-8c5a62b2617f@s19g2000prg.googlegroups.com>
Source record: 5488

amazing site and all is free and a lot of goodies!

http://www.getaction4ever.com

## 352. FS used AEA JRC

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-07 00:19:32 UTC
From: "brm@netcabo.pt" <brm@netcabo.pt>
Message-ID: <19f77922-3114-45f2-b5ad-8651d185e1e6@c33g2000hsd.googlegroups.com>
Source record: 5489

FS used AEA PK232
JRC speaker

http://brm.planetaclix.pt/usados.htm

73,CT1BRM
JM

## 353. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-07 07:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1204873500@panix.com>
Source record: 5490
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

# 354. FA: COLLINS RELAYS & DRAFT DRAWING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-07 14:21:32 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <MbcAj.287184$MJ6.253410@bgtnsc05-news.ops.worldnet.att.net>
Source record: 5491

COLLINS REPLACEMENT RELAYS & DRAFT DRAWING: see at:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

Tnx for looking, Heytubeguy

## 355. FS: Micron A/C Adapter/Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-09 21:45:17 UTC
From: Bill Golden <shortwave1@verizon.net>
Message-ID: <NTYAj.3448$y83.1757@trndny06>
Source record: 5492
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

For Sale:

Micron A/C Adapter / DC Power Supply
(Model F1700C), in like-new condition.
Includes 6 foot A/C line cord

Input: 110 Volts AC, 1.8 A, 50-60 Hz
Output: 19 Volts DC, 2.6 A, 50 W Max.

$ 10,00 plus $ 6.00 for USPS shipping
(Cont'l U.S. Only).

-Bill
KB3PT
E-mail: shortwave1@verizon.net

## 356. Looking for schematics for old cable box

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-10 05:48:16 UTC
From: "H. P. Friedrichs" <nospam@please.com>
Message-ID: <5dGdnbEXAe0_VknanZ2dnUVZ_jydnZ2d@velocitywest.net>
Source record: 5493
Cross-posted to: sci.electronics.repair,rec.radio.amateur.homebrew

Hi, all--

I picked up an old cable box at a recent hamfest. I'd like to use the tuner module as part of a receiver project.

I'm fairly good at reverse-engineering things, but that can be a time consuming process. I wonder if anyone might have service schematics for this box:

Jerrold Impulse CATV Converter
General Instrument Corporation
Jerrold Division
Model DPBB 7312P/RI

The tuner module itself has a sticker with the following information:

LCMM (TAD)
824-522-000 M H
1217DA

Please drop me a line if you can help. My email is:

hpf (atsign) gainbroadband (dot) com

Thanks in advance,

Pete
AC7ZL

## 357. Re: Looking for schematics for old cable box

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-11 02:34:44 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <fr4r44$iht$1@theodyn.ncf.ca>
Source record: 5494

"H. P. Friedrichs" (nospam@please.com) writes:
> Hi, all--
>
> I picked up an old cable box at a recent hamfest. I'd like to use the
> tuner module as part of a receiver project.
>
> I'm fairly good at reverse-engineering things, but that can be a time
> consuming process. I wonder if anyone might have service schematics for
> this box:
>
How much trouble can it be? Those modules are generally self contained,
with only some peripheral circuitry needed.

Often the metal on the modules will be stamped with the function of
the pin, though it may be slightly cryptic. Sometimes the circuit board
may be marked.

"B+", ground, tuning voltage, a sample of the VCO that has been prescaled
via an internal divider, how many other pins can there be? The input
and output are generally on Type F connectors, and will be apparent from
the markings on the outside of the unit.

Open the case, turn the unit on, and measure the voltages. Change channels
and see which one varies. That will be the control voltage.

Or just trace the wiring. There'll be a regulator at the output of the
transformer/rectifier, and the output of that will supply a constant voltage
to the module. You can either read the voltage off the regulator, or measure
it at the output.

The prescaler output will go to some sort of divider, a simple logic counter
of some logic family which further prescales it down in frequency.

The control voltage to the VCO will be connected to some really good
capacitor, I guess it's before a good op-amp. This would be the "memory",
keeping things on channel when it's powered off.

Ground is pretty obvious, though at least some units I've looked at
used a negative supply voltage, so the ground was where the positive
output of the power supply went.

Those modules are really easy to use, which is why they've ended up
being used in various projects over the years.

TV tuners in tv sets and even VCRs tend to be more complicated, since
they are single conversion, and they have to be switched from VHF-lo to
VHF-hi to UHF, and there is usually a pin on those modules for AGC.

Michael VE2BVW

# 358. china wholesale cheap 2008 nfl all sear jersey wholesale super bowl jersey ,nba jersey 's mlb jersey

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-12 01:34:17 UTC
From: nflstore98@yahoo.com.cn
Message-ID: <3412f642-375f-41d6-aecd-3c5aaf02c9a3@u10g2000prn.googlegroups.com>
Source record: 5495

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Jersey ,youth NBA swingman Jersey ,NBA authentic basketball
Jersey ,basketball Jersey NBA new nwt ,NBA all star game
Jersey ,NBA new Jersey ,adidas NBA Jersey ,NBA Jersey for
dog ,official NBA Jersey ,classics hardwood Jersey NBA ,old
school NBA Jersey ,NBA Jersey for woman ,classic NBA Jersey at
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Jersey ,best selling NFL Jersey ,youth authentic NFL Jersey ,boy NFL
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# 359. china cheap wholesale NFL NHL Jerseys (www.sneakersea.com) nike sneaker jordan shoes air force one gucci

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-12 15:03:55 UTC
From: "sneakersea@yahoo.com.cn" <sneakersea@yahoo.com.cn>
Message-ID: <1520cebe-5b10-46cc-9e0e-9c953a7f0569@e6g2000prf.googlegroups.com>
Source record: 5496

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# 360. 30e RADIO FLEA MARKET in BEETSTERZWAAG on 31 May 2008

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-13 21:22:32 UTC
From: pa3esf@gmail.com
Message-ID: <71554951-870f-4e40-8f43-1104dd4deb96@i7g2000prf.googlegroups.com>
Source record: 5497

30e RADIO FLEA MARKET in BEETSTERZWAAG on 31 May 2008

The radio flea market takes place to - 31 May 2008. Do you look for an exotic transistor kit or a super recipient, fixed and do manufacture kit...
or do meet of radio friends? Dan comes Saturday 31 May to the Friese radio market into Beetsterzwaag!

Many thousand visitors come each year from the entire Netherlands and Europe to this radio flea market spectacle, approx. 100 dealers, with most diverse articles, like transmitters, recievers, power supplies, antennas, software, hardware and literature.

Additionally of businessmen in the place also a flea market with many attraction organized for large and small. There are some sales desks free at the moment on the radio flea market, you can reserve by telephone & email, contact on to take with the executive committee. Down are these addresses.

How does one find after Beetsterzwaag? From direction Apeldoorn = > Zwolle = > Meppel = > Heerenveen = > Drachten, departure after Gorredijk Tijnje comes departure (28) Beetsterzwaag.

From direction Bremen = > Groningen = > Drachten = > Heerenveen, departure after Drachten Haven comes departure (28) Beetsterzwaag.

On 2mtr, 145,700 Digi Heerenveen can one to instruct leave themselves. Inlet is from 09:00 to 16:00 MESZ, into which Cafeteria one also boarded into this time.

This whole is organized of VERON FRIESE WOUDEN. Cordially Welcome in Friesland on the 30e FRM!

Look for more information at the site: www.frm.a63.org

Contact people, are:

Announce sales desks & Public relation:
Weit Lap, PA3ESF
Bouekers 40 9247 AR URETERP
Tel. 0031(0) 512 302702
E-mail : admin.frm@a63.org

## 361. 4CX1500B Plate Voltages SSB/CW-RTTY

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-15 21:45:43 UTC
From: Jim <nospam@nospam.com>
Message-ID: <fhgot3tqj4jcmqp38eqfi19knt0f5vi3r1@4ax.com>
Source record: 5498

Can anyone tell me what are the normal plate voltages
used on this tube in the two modes? I'm trying to figure out
what plate transformer to look for or try to cobble up?

I've googled lots of these amplifiers but see no mention
of CW/RTTY mode voltages/currents. It looks like about
3000V on SSB but see not mention of other modes. My SB220
had a tap on primary at the SQR2 point to switch modes,
would that be the same for this tube? What would be good
parameters for CW/RTTY operation?

Thanks.

WA5DXP

## 362. Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-15 22:23:07 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <f%XCj.32304$J41.13043@newssvr14.news.prodigy.net>
Source record: 5499
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

I got a couple of the subject tubes which are supposed to be "glow modulator tubes". Best I can determine is that the light output will vary with current but I can't find data sheet googling. If anyone has pinout and/or data I'd sure like to see it. I think it might be a mid 1960s item as my 1957 Sylvania manual doesn't show it.
thanks

--

73
Hank WD5JFR

## 363. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-15 23:35:58 UTC
From: Richard Knoppow <dickburk@ix.netcom.com>
Message-ID: <13tonb5qunm955c@corp.supernews.com>
Source record: 5500
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in
message
news:f%XCj.32304$J41.13043@newssvr14.news.prodigy.net...
>I got a couple of the subject tubes which are supposed to
>be "glow modulator tubes". Best I can determine is that
>the light output will vary with current but I can't find
>data sheet googling. If anyone has pinout and/or data I'd
>sure like to see it. I think it might be a mid 1960s item
>as my 1957 Sylvania manual doesn't show it.
> thanks
>
> --
>
> 73
> Hank WD5JFR
Google is your friend. See:
http://www.radiomuseum.org/tubes/tube_r1131c.html for a
little information. Unfortunately they require a membership
fee to download the datasheet illustrated.
Evidently these tubes were orginally used for early
facsimile machines (the sort used to send newspaper wire
photos) but the search shows it was also used extensively in
vision research.
Perhaps someone knows of a better source for the
datasheet.

--
---
Richard Knoppow
Los Angeles, CA, USA
dickburk@ix.netcom.com

# 364. Re: 4CX1500B Plate Voltages SSB/CW-RTTY

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 03:13:49 UTC
From: Gerry <breakeronthesideletitslide@yahoo.co.uk>
Message-ID: <47dc9068$1_4@mk-nntp-2.news.uk.tiscali.com>
Source record: 5401

Jim wrote:
> Can anyone tell me what are the normal plate voltages
> used on this tube in the two modes? I'm trying to figure out
> what plate transformer to look for or try to cobble up?
>
> I've googled lots of these amplifiers but see no mention
> of CW/RTTY mode voltages/currents. It looks like about
> 3000V on SSB but see not mention of other modes. My SB220
> had a tap on primary at the SQR2 point to switch modes,
> would that be the same for this tube? What would be good
> parameters for CW/RTTY operation?
>
> Thanks.
>
> WA5DXP
>
>
You should be OK with 3KV on the anode + 350V on G2 , de-rating for RTTY will depend more on the amount of cooling air and PSU. Watch the grid current as it's only rated at 1W max.

Have a look at care and feeding of power grid tubes on the CPI site (they own Eimac), http://www.cpii.com/library.cfm/9 .

Gerry....

## 365. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 04:20:05 UTC
From: Robert Baer <robertbaer@localnet.com>
Message-ID: <13tp4egkuf3sb69@corp.supernews.com>
Source record: 5402
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

Henry Kolesnik wrote:
> I got a couple of the subject tubes which are supposed to be "glow
> modulator tubes". Best I can determine is that the light output will
> vary with current but I can't find data sheet googling. If anyone has
> pinout and/or data I'd sure like to see it. I think it might be a mid
> 1960s item as my 1957 Sylvania manual doesn't show it.
> thanks
>
I have a Sylania Technical Manual of tube data sheets dated 1959 and
have the blue add-ons to 1960, and that tube is not listed anywhere in it.
Sorry.

## 366. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 11:21:14 UTC
From: Mike Schultz <mls2004@SPAMSPAMSPAMverizon.net>
Message-ID: <Ko7Dj.8326$Id3.6502@trnddc07>
Source record: 5403
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

Google "crater lamp"

--
Mike Schultz

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in message
news:f%XCj.32304$J41.13043@newssvr14.news.prodigy.net...
>I got a couple of the subject tubes which are supposed to be "glow
>modulator tubes". Best I can determine is that the light output will vary
>with current but I can't find data sheet googling. If anyone has pinout
>and/or data I'd sure like to see it. I think it might be a mid 1960s item
>as my 1957 Sylvania manual doesn't show it.
> thanks
>
> --
>
> 73
> Hank WD5JFR

## 367. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 13:10:15 UTC
From: K3HVG <jeepp@comcast.net>
Message-ID: <KMednUEEv_qtgUDanZ2dnUVZ_jydnZ2d@comcast.com>
Source record: 5404
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

Henry Kolesnik wrote:
> I got a couple of the subject tubes which are supposed to be "glow
> modulator tubes". Best I can determine is that the light output will
> vary with current but I can't find data sheet googling. If anyone has
> pinout and/or data I'd sure like to see it. I think it might be a mid
> 1960s item as my 1957 Sylvania manual doesn't show it.
> thanks
>
Sounds like what we used to call "crater" (sp?) tubes and were used in
NOAA weather satellite optical printers for APT data in the 80's.
Muirhead (UK) was the mfgr. of the receiver/printer units. I simply
don't recall who mfg the tubes, though. They were octal based, however.

## 368. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 13:19:21 UTC
From: kludge@panix.com
Message-ID: <frj6op$jvd$1@panix2.panix.com>
Source record: 5405
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

K3HVG <jeepp@comcast.net> wrote:
>Henry Kolesnik wrote:
>> I got a couple of the subject tubes which are supposed to be "glow
>> modulator tubes". Best I can determine is that the light output will
>> vary with current but I can't find data sheet googling. If anyone has
>> pinout and/or data I'd sure like to see it. I think it might be a mid
>> 1960s item as my 1957 Sylvania manual doesn't show it.
>> thanks
>>
>Sounds like what we used to call "crater" (sp?) tubes and were used in
>NOAA weather satellite optical printers for APT data in the 80's.
>Muirhead (UK) was the mfgr. of the receiver/printer units. I simply
>don't recall who mfg the tubes, though. They were octal based, however.

Yes, it's definitely a crater tube. I don't have a data sheet on that
one, but I have the phototube volume of the RCA HB-3 which has some other
more or less similar crater tubes listed. The data sheet has a chart of
light output vs. current and it's not very linear, but it tries to be.

They were used in some early computer plotters and in a bunch of chart
recorders as well.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

## 369. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 16:02:52 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <LwbDj.1471$LV5.806@newssvr19.news.prodigy.net>
Source record: 5406
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

I just posted a pic of them to alt.binaries.pictures.radio
Hank
"Scott Dorsey" <kludge@panix.com> wrote in message
news:frj6op$jvd$1@panix2.panix.com...
> K3HVG <jeepp@comcast.net> wrote:
>>Henry Kolesnik wrote:
>>> I got a couple of the subject tubes which are supposed to be "glow
>>> modulator tubes". Best I can determine is that the light output
>>> will
>>> vary with current but I can't find data sheet googling. If anyone
>>> has
>>> pinout and/or data I'd sure like to see it. I think it might be a
>>> mid
>>> 1960s item as my 1957 Sylvania manual doesn't show it.
>>> thanks
>>>
>>Sounds like what we used to call "crater" (sp?) tubes and were used in
>>NOAA weather satellite optical printers for APT data in the 80's.
>>Muirhead (UK) was the mfgr. of the receiver/printer units. I simply
>>don't recall who mfg the tubes, though. They were octal based,
>>however.
>
> Yes, it's definitely a crater tube. I don't have a data sheet on that
> one, but I have the phototube volume of the RCA HB-3 which has some
> other
> more or less similar crater tubes listed. The data sheet has a chart
> of
> light output vs. current and it's not very linear, but it tries to be.
>
> They were used in some early computer plotters and in a bunch of chart
> recorders as well.
> --scott
> --
> "C'est un Nagra. C'est suisse, et tres, tres precis."

## 370. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 16:25:09 UTC
From: Jim Menning <jmenningSPAM@new.rr.com>
Message-ID: <47dd4998$0$17329$4c368faf@roadrunner.com>
Source record: 5407
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in message
news:LwbDj.1471$LV5.806@newssvr19.news.prodigy.net...
>
>I just posted a pic of them to alt.binaries.pictures.radio
> Hank
>

It's also got a very interesting mounting collar on it. Is that part of the tube
socket, or completely separate from it?

## 371. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 16:26:32 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <XSbDj.1475$LV5.1147@newssvr19.news.prodigy.net>
Source record: 5408
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

```
The octal socket and mounting bracket are separate items.
"Jim Menning" <jmenningSPAM@new.rr.com> wrote in message
news:47dd4998$0$17329$4c368faf@roadrunner.com...
>
> "Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in message
> news:LwbDj.1471$LV5.806@newssvr19.news.prodigy.net...
>>
>>I just posted a pic of them to alt.binaries.pictures.radio
>> Hank
>>
>
>
> It's also got a very interesting mounting collar on it. Is that part
> of the tube socket, or completely separate from it?
>
```

## 372. USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 19:39:01 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <oHeDj.1493$LV5.53@newssvr19.news.prodigy.net>
Source record: 5409
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
mV/deg F....but I'm getting lazy...
I'd like to find a reasonably priced but accurate and durable multimeter
with a USB interface and software so I can log temp with some kind of
time stamp using my Fluke temp probe. If someone experience with any
I'd like to know what's available new and used. I'm attempting to
evaluate some insulation and thermal mass for a passive solar home
design.
tnx

--

73
Hank WD5JFR

## 373. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 20:05:06 UTC
From: nesesu <neil_sutcliffe@telus.net>
Message-ID: <2593f1e0-88d4-4691-a772-614139266438@c19g2000prf.googlegroups.com>
Source record: 5410
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

On Mar 16, 12:39 pm, "Henry Kolesnik" <koles...@nojunksbcglobal.net>
wrote:
> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
> mV/deg F....but I'm getting lazy...
> I'd like to find a reasonably priced but accurate and durable multimeter
> with a USB interface and software so I can log temp with some kind of
> time stamp using my Fluke temp probe.  If someone experience with any
> I'd like to know what's available new and used.  I'm attempting to
> evaluate some insulation and thermal mass for a passive solar home
> design.
> tnx
>
> --
>
> 73
> Hank WD5JFR

I too am looking for a voltage data logger with USB output and
software. I can find some fairly inexpensive thermal loggers like
this, but nothing that is, say, a 200mV input logger.
The thermal ones I have seen look like a USB memory stick.

Neil S.

## 374. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 20:10:48 UTC
From: Fred Bloggs <nospam@nospam.com>
Message-ID: <47DD7EC8.5040009@nospam.com>
Source record: 5411
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
> mV/deg F....but I'm getting lazy...
> I'd like to find a reasonably priced but accurate and durable multimeter
> with a USB interface and software so I can log temp with some kind of
> time stamp using my Fluke temp probe. If someone experience with any
> I'd like to know what's available new and used. I'm attempting to
> evaluate some insulation and thermal mass for a passive solar home design.
> tnx
>

Why tie up the multimeter..

This does not look bad:
http://www.microdaq.com/lascar/usb_thermocouple_logger.php

But if you insist:
http://www.home.agilent.com/agilent/product.jspx?nid=-536902435.536910695.00&cc=US&lc=eng

## 375. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 20:37:12 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <XxfDj.1498$LV5.483@newssvr19.news.prodigy.net>
Source record: 5412
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

Radio Shack has one for $70 but it's RS 232 and Amazon sells one for $65
but the reviews aren't that great.
Lets see what others scare up..
Hank
"Fred Bloggs" <nospam@nospam.com> wrote in message
news:47DD7EC8.5040009@nospam.com...
>
>> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs
>> 1 mV/deg F....but I'm getting lazy...
>> I'd like to find a reasonably priced but accurate and durable
>> multimeter with a USB interface and software so I can log temp with
>> some kind of time stamp using my Fluke temp probe. If someone
>> experience with any I'd like to know what's available new and used.
>> I'm attempting to evaluate some insulation and thermal mass for a
>> passive solar home design.
>> tnx
>>
>
> Why tie up the multimeter..
>
> This does not look bad:
> http://www.microdaq.com/lascar/usb_thermocouple_logger.php
>
> But if you insist:
>
http://www.home.agilent.com/agilent/product.jspx?nid=-536902435.536910695.00&cc=US&lc=eng
>

## 376. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 20:58:29 UTC
From: Fred Bloggs <nospam@nospam.com>
Message-ID: <47DD89F5.8040704@nospam.com>
Source record: 5414
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

Henry Kolesnik wrote:
> Radio Shack has one for $70 but it's RS 232 and Amazon sells one for $65
> but the reviews aren't that great.

> Lets see what others scare up..
> Hank
> "Fred Bloggs" <nospam@nospam.com> wrote in message
> news:47DD7EC8.5040009@nospam.com...
>
>>
>>> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs
>>> 1 mV/deg F....but I'm getting lazy...
>>> I'd like to find a reasonably priced but accurate and durable
>>> multimeter with a USB interface and software so I can log temp with
>>> some kind of time stamp using my Fluke temp probe. If someone
>>> experience with any I'd like to know what's available new and used.
>>> I'm attempting to evaluate some insulation and thermal mass for a
>>> passive solar home design.
>>> tnx
>>>
>>
>> Why tie up the multimeter..
>>
>> This does not look bad:
>> http://www.microdaq.com/lascar/usb_thermocouple_logger.php
>>
>> But if you insist:
>>
http://www.home.agilent.com/agilent/product.jspx?nid=-536902435.536910695.00&cc=US&lc=eng
>>
>>
>

Here's what $40 gets you, note the limited measurement range and sample
frequency:
http://www.logicbeach.com/pdf/EL-USB-Lite.pdf

## 377. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 21:03:02 UTC
From: "David L. Jones" <altzone@gmail.com>
Message-ID: <b3d0ec10-eb1d-44c9-a7b7-0a0041117d3b@s8g2000prg.googlegroups.com>
Source record: 5415
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

On Mar 17, 6:39 am, "Henry Kolesnik" <koles...@nojunksbcglobal.net>
wrote:
> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
> mV/deg F....but I'm getting lazy...
> I'd like to find a reasonably priced but accurate and durable multimeter
> with a USB interface and software so I can log temp with some kind of
> time stamp using my Fluke temp probe. If someone experience with any
> I'd like to know what's available new and used. I'm attempting to
> evaluate some insulation and thermal mass for a passive solar home
> design.
> tnx

These may be the best solution, if you don't need real-time updating
on the PC.
http://www.maxim-ic.com/products/ibutton/ibuttons/thermochron.cfm
I used a bunch of them to evaluate a Solar Air Heater I designed
(http://www.solarsponge.com), along with other passive cooling and
heating aspects of my home.
You can use as many as you want and actually get thermal mappings of a
space. i.e. suspend then at different heights in a room and get a map
of the temperature layers. I've put then in air ducts, in water, as
contact thermometers etc

Infinitely better than a PC and a multimeter.

Dave.

## 378. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 21:48:54 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13tr1ti35rp7p60@corp.supernews.com>
Source record: 5413
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

nesesu wrote:

<snip>
Wow this is promiscuously cross-posted...

>
> I too am looking for a voltage data logger with USB output and
> software. I can find some fairly inexpensive thermal loggers like
> this, but nothing that is, say, a 200mV input logger.
> The thermal ones I have seen look like a USB memory stick.

Where you can install a computer, one could use 1-Wire devices
and software like 'digitemp' or roll-your-own.

For standalone, I have used educational data loggers like
the TI CBL and serial-port interfaced loggers from the likes
of DH, Vernier or Fourier, which for the more general purpose
models include a 200mv range.

Michael

## 379. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 22:05:41 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <7NSdnQ7oSNwnBEDanZ2dnUVZ_gydnZ2d@comcast.com>
Source record: 5416
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

```
"Fred Bloggs" <nospam@nospam.com> wrote in message
news:47DD89F5.8040704@nospam.com...
>
>
> Henry Kolesnik wrote:
>> Radio Shack has one for $70 but it's RS 232 and Amazon sells one for $65 but
>> the reviews aren't that great.
>
>> Lets see what others scare up..
>> Hank
>> "Fred Bloggs" <nospam@nospam.com> wrote in message
>> news:47DD7EC8.5040009@nospam.com...
>>
>>>
>>>> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
>>>> mV/deg F....but I'm getting lazy...
>>>> I'd like to find a reasonably priced but accurate and durable multimeter
>>>> with a USB interface and software so I can log temp with some kind of time
>>>> stamp using my Fluke temp probe. If someone experience with any I'd like
>>>> to know what's available new and used. I'm attempting to evaluate some
>>>> insulation and thermal mass for a passive solar home design.
>>>> tnx
>>>>
>>>
>>> Why tie up the multimeter..
>>>
>>> This does not look bad:
>>> http://www.microdaq.com/lascar/usb_thermocouple_logger.php
>>>
>>> But if you insist:
>>>
http://www.home.agilent.com/agilent/product.jspx?nid=-536902435.536910695.00&cc=US&lc=eng
>>>
>>
>
> Here's what $40 gets you, note the limited measurement range and sample
> frequency:
> http://www.logicbeach.com/pdf/EL-USB-Lite.pdf
>

I like the Microdaq unit. Good price, good value.
```

A couple cheaper units, pretty good prices:
http://www.weathershop.com/USB1_temperature_logger.htm. $59.95 USD. Includes

software, temperature range from -25 to +80&#65533;C. Logging intervals from 10 seconds to 12 hours and capacity of more than 16,000 readings.

Omega has what appears to be the same unit as above, @$60 USD.
http://www.omega.com/ppt/pptsc.asp?ref=om-el-usb-1

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

"In theory, there isn't any difference between theory and practice. In practice, there is." - Yogi Berra

## 380. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-16 23:33:54 UTC
From: Martin Riddle <martin_rid@verizon.net>
Message-ID: <C7iDj.6903$FK1.4379@trndny08>
Source record: 5417
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in message
news:oHeDj.1493$LV5.53@newssvr19.news.prodigy.net...
>I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1 mV/deg F....but I'm getting lazy...
> I'd like to find a reasonably priced but accurate and durable multimeter with a USB interface and software so I can log
> temp with some kind of time stamp using my Fluke temp probe. If someone experience with any I'd like to know what's
> available new and used. I'm attempting to evaluate some insulation and thermal mass for a passive solar home design.
> tnx
>
> --
>
> 73
> Hank WD5JFR

Omega has the OM-62, standalone. I've worked with one, stick it where you want, then download the data. Temp dew point and
RH.
http://www.omega.com/ppt/pptsc.asp?ref=OM-62&nav=DASE01

Cheers

## 381. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-17 01:13:33 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <0BjDj.1527$LV5.1516@newssvr19.news.prodigy.net>
Source record: 5418
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

```
Wow, my options are getting better and better..
Please keep sending them in..
thanks
73
Hank WD5JFR
"Martin Riddle" <martin_rid@verizon.net> wrote in message
news:C7iDj.6903$FK1.4379@trndny08...
> "Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in message
> news:oHeDj.1493$LV5.53@newssvr19.news.prodigy.net...
>>I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
>>mV/deg F....but I'm getting lazy...
>> I'd like to find a reasonably priced but accurate and durable
>> multimeter with a USB interface and software so I can log temp with
>> some kind of time stamp using my Fluke temp probe. If someone
>> experience with any I'd like to know what's available new and used.
>> I'm attempting to evaluate some insulation and thermal mass for a
>> passive solar home design.
>> tnx
>>
>> --
>>
>> 73
>> Hank WD5JFR
>
> Omega has the OM-62, standalone. I've worked with one, stick it where
> you want, then download the data. Temp dew point and RH.
> http://www.omega.com/ppt/pptsc.asp?ref=OM-62&nav=DASE01
>
> Cheers
>
>
```

## 382. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-17 01:35:04 UTC
From: "David L. Jones" <altzone@gmail.com>
Message-ID: <3301830f-b37b-46b8-bc3b-47edea0c3543@e23g2000prf.googlegroups.com>
Source record: 5421
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

On Mar 17, 10:33 am, "Martin Riddle" <martin_...@verizon.net> wrote:
> "Henry Kolesnik" <koles...@nojunksbcglobal.net> wrote in
messagenews:oHeDj.1493$LV5.53@newssvr19.news.prodigy.net...
> >I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1 mV/deg F....but
I'm getting lazy...
> > I'd like to find a reasonably priced but accurate and durable multimeter with a USB
interface and software so I can log
> > temp with some kind of time stamp using my Fluke temp probe. If someone experience with
any I'd like to know what's
> > available new and used. I'm attempting to evaluate some insulation and thermal mass for
a passive solar home design.
> > tnx
>
> > --
>
> > 73
> > Hank WD5JFR
>
> Omega has the OM-62, standalone. I've worked with one, stick it where you want, then
download the data. Temp dew point and
> RH.http://www.omega.com/ppt/pptsc.asp?ref=OM-62&nav=DASE01
>
> Cheers

The Themrochron iButtons are a much sexier solution. Only $25ea, have
up to a 10 year battery life, are waterproof, and are only the size a
few stacked coins.
https://shop.maxim-ic.com/storefront/priceavailable.do?Partnumber=DS1921G&event=PartSearch
&menuitem=PriceAndAvailability
http://www.maxim-ic.com/quick_view2.cfm/qv_pk/4023

Serial and USB readers are available, and data can be exported to
Excel etc.
You can get little plastic tags to attach them to to things too. I
hang one off my harness when I go canyoning, to log the water temp.

Dave.

## 383. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-17 01:40:44 UTC
From: maxhifi <no@spam.com>
Message-ID: <47DDCC15.3B96FD5A@spam.com>
Source record: 5422
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

Henry Kolesnik wrote:

> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
> mV/deg F....but I'm getting lazy...
> I'd like to find a reasonably priced but accurate and durable multimeter
> with a USB interface and software so I can log temp with some kind of
> time stamp using my Fluke temp probe. If someone experience with any
> I'd like to know what's available new and used. I'm attempting to
> evaluate some insulation and thermal mass for a passive solar home
> design.
> tnx
>
> --
>
> 73
> Hank WD5JFR

I was also working on a project which required temperature to be monitored in many discrete points, over a period of time. There's several options, but I believe the best to be as below:

http://www.logtagrecorders.com/

These are cheap, simple, accurate enough, easy to use, and pretty much perfect for your application. The previous generation of logger we used (ACR) were about $800 per unit, and these do basically the same thing for $30 a piece. Thank you China! It would be prudent to buy several, and put them in different spots so you can also evaluate temperature variations.

I think it will save you time, and get you better and more useful data if you go with this approach rather than trying to use a general purpose multimeter.

## 384. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-17 02:34:16 UTC
From: Jamie <jamie_ka1lpa_not_valid_after_ka1lpa_@charter.net>
Message-ID: <rNjDj.69$WV5.50@newsfe05.lga>
Source record: 5419
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

Henry Kolesnik wrote:
> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
> mV/deg F....but I'm getting lazy...
> I'd like to find a reasonably priced but accurate and durable multimeter
> with a USB interface and software so I can log temp with some kind of
> time stamp using my Fluke temp probe. If someone experience with any
> I'd like to know what's available new and used. I'm attempting to
> evaluate some insulation and thermal mass for a passive solar home design.
> tnx
>
the Fluke 289 series has a nice trending graph in it and if you want to link
it to the PC, it has an IR port which many laptops have..including desktops.
I own a 289, I like it. It can do up to 200 hours of recording
and data can be read back in a chart etc..

--
http://webpages.charter.net/jamie_5"

## 385. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-17 02:40:44 UTC
From: Jamie <jamie_ka1lpa_not_valid_after_ka1lpa_@charter.net>
Message-ID: <tTjDj.70$WV5.34@newsfe05.lga>
Source record: 5420
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

Henry Kolesnik wrote:

> Wow, my options are getting better and better..
> Please keep sending them in..
> thanks
> 73
> Hank WD5JFR
>>> 73
>>> Hank WD5JFR
>>
>>
>> Omega has the OM-62, standalone. I've worked with one, stick it where
>> you want, then download the data. Temp dew point and RH.
>> http://www.omega.com/ppt/pptsc.asp?ref=OM-62&nav=DASE01
>>
>> Cheers
Check that out. It can computer link of show the data
on it's own VGA screen along with saving it for later
viewing.

http://us.fluke.com/usen/products/Fluke+289.htm

http://webpages.charter.net/jamie_5"

## 386. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-17 05:48:40 UTC
From: William Noble <nobody@nowhere.com>
Message-ID: <47ddfb82$0$26101$88260bb3@free.teranews.com>
Source record: 5429
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

there is a plethora of data collection cards, I'd start there - why USB and
not PCI? anyway, not my problem - do a search for "data collection cards"
you will find thngs like this www.superlogics.com/usb.asp
"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in message
news:oHeDj.1493$LV5.53@newssvr19.news.prodigy.net...
>I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1
>mV/deg F....but I'm getting lazy...
> I'd like to find a reasonably priced but accurate and durable multimeter
> with a USB interface and software so I can log temp with some kind of time
> stamp using my Fluke temp probe. If someone experience with any I'd like
> to know what's available new and used. I'm attempting to evaluate some
> insulation and thermal mass for a passive solar home design.
> tnx
>
> --
>
> 73
> Hank WD5JFR

--
Posted via a free Usenet account from http://www.teranews.com

## 387. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 00:21:19 UTC
From: "Gary P. Fiber" <gfiber@comcast.net>
Message-ID: <ul2ut397ftk2clkhpbv8qt9kplsdllrd82@4ax.com>
Source record: 5423

On Sun, 16 Mar 2008 18:35:04 -0700 (PDT), "David L. Jones"
<altzone@gmail.com> wrote:

>On Mar 17, 10:33 am, "Martin Riddle" <martin_...@verizon.net> wrote:
>> "Henry Kolesnik" <koles...@nojunksbcglobal.net> wrote in
messagenews:oHeDj.1493$LV5.53@newssvr19.news.prodigy.net...
>> >I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs 1 mV/deg F....but
I'm getting lazy...
>> > I'd like to find a reasonably priced but accurate and durable multimeter with a USB
interface and software so I can log
>> > temp with some kind of time stamp using my Fluke temp probe. If someone experience
with any I'd like to know what's
>> > available new and used. I'm attempting to evaluate some insulation and thermal mass
for a passive solar home design.
>> > tnx
>>
>> > --
>>
>> > 73
>> > Hank WD5JFR
>>
>> Omega has the OM-62, standalone. I've worked with one, stick it where you want, then
download the data. Temp dew point and
>> RH.http://www.omega.com/ppt/pptsc.asp?ref=OM-62&nav=DASE01
>>
>> Cheers
>
>The Themrochron iButtons are a much sexier solution. Only $25ea, have
>up to a 10 year battery life, are waterproof, and are only the size a
>few stacked coins.
>https://shop.maxim-ic.com/storefront/priceavailable.do?Partnumber=DS1921G&event=PartSearc
h&menuitem=PriceAndAvailability
>http://www.maxim-ic.com/quick_view2.cfm/qv_pk/4023
>
>Serial and USB readers are available, and data can be exported to
>Excel etc.
>You can get little plastic tags to attach them to to things too. I
>hang one off my harness when I go canyoning, to log the water temp.
>
>Dave.

Those are pretty cool I read about one sending them aloft in a model
rocket nose cone and doing temperature measurements during the rockets
flight.

Gary K8IZ

## 388. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 00:48:47 UTC
From: Martin Riddle <martin_rid@verizon.net>
Message-ID: <PjEDj.2253$jw2.67@trndny04>
Source record: 5424
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

"Robert Baer" <robertbaer@localnet.com> wrote in message
news:13tp4egkuf3sb69@corp.supernews.com...
> Henry Kolesnik wrote:
>> I got a couple of the subject tubes which are supposed to be "glow modulator tubes".
Best I can determine is that the
>> light output will vary with current but I can't find data sheet googling. If anyone has
pinout and/or data I'd sure like
>> to see it. I think it might be a mid 1960s item as my 1957 Sylvania manual doesn't show
it.
>> thanks
>>
> I have a Sylania Technical Manual of tube data sheets dated 1959 and have the blue
add-ons to 1960, and that tube is not
> listed anywhere in it.
> Sorry.

Hi Robert,

I have some PDF's of scanned tube manuals(Eimac, Taylor RCA), I would love to trade a few
for a pdf of the Sylvania Manuals.
If interested email me.

Cheers

## 389. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 02:00:04 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <CmFDj.1620$LV5.642@newssvr19.news.prodigy.net>
Source record: 5425
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

Found another option which may be the least expensive and that is a
DataWatch Elite M2000 temperature logger with LCD display and is RS232
but works with a conversion cable to USB. Come with software and can
store 1,868 samples, sampling at 1 to 255 minutes with a real-time
clock, -40F to +158F. Cost $45.00.. Replaceable lithium cell runs it
for a year. I have a PDF spec sheet if anyone wants it, let know.

--

73
Hank WD5JFR
"Jamie" <jamie_ka1lpa_not_valid_after_ka1lpa_@charter.net> wrote in
message news:rNjDj.69$WV5.50@newsfe05.lga...
> Henry Kolesnik wrote:
>> I have a Fluke 87 and a Fluke 80T-150 temperature probe that outputs
>> 1 mV/deg F....but I'm getting lazy...
>> I'd like to find a reasonably priced but accurate and durable
>> multimeter with a USB interface and software so I can log temp with
>> some kind of time stamp using my Fluke temp probe. If someone
>> experience with any I'd like to know what's available new and used.
>> I'm attempting to evaluate some insulation and thermal mass for a
>> passive solar home design.
>> tnx
>>
> the Fluke 289 series has a nice trending graph in it and if you want
> to link
> it to the PC, it has an IR port which many laptops have..including
> desktops.
> I own a 289, I like it. It can do up to 200 hours of recording
> and data can be read back in a chart etc..
>
>
> --
> http://webpages.charter.net/jamie_5"
>

# 390. Re: 4CX1500B Plate Voltages SSB/CW-RTTY

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 02:18:15 UTC
From: Jim <nospam@nospam.com>
Message-ID: <3g9ut31g4tqkbpcdotticoroq0e4hlc3io@4ax.com>
Source record: 5426

Gerry;

Thanks for the link. The SB220 had a tap on primary, so when you
switched to CW/RTTY you did not have to retune the amp,
which was probably done by others.

I'll check out the site.

Jim

On Sun, 16 Mar 2008 03:13:49 +0000, Gerry
<breakeronthesideletitslide@yahoo.co.uk> wrote:

>Jim wrote:
>> Can anyone tell me what are the normal plate voltages
>> used on this tube in the two modes? I'm trying to figure out
>> what plate transformer to look for or try to cobble up?
>>
>> I've googled lots of these amplifiers but see no mention
>> of CW/RTTY mode voltages/currents. It looks like about
>> 3000V on SSB but see not mention of other modes. My SB220
>> had a tap on primary at the SQR2 point to switch modes,
>> would that be the same for this tube? What would be good
>> parameters for CW/RTTY operation?
>>
>> Thanks.
>>
>> WA5DXP
>>
>>
>You should be OK with 3KV on the anode + 350V on G2 , de-rating for RTTY
>will depend more on the amount of cooling air and PSU. Watch the grid
>current as it's only rated at 1W max.
>
>Have a look at care and feeding of power grid tubes on the CPI site
>(they own Eimac), http://www.cpii.com/library.cfm/9 .
>
>Gerry....

## 391. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 02:48:06 UTC
From: Richard Knoppow <dickburk@ix.netcom.com>
Message-ID: <13tubbhn5jefa06@corp.supernews.com>
Source record: 5428
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

"Martin Riddle" <martin_rid@verizon.net> wrote in message
news:PjEDj.2253$jw2.67@trndny04...
>
> "Robert Baer" <robertbaer@localnet.com> wrote in message
> news:13tp4egkuf3sb69@corp.supernews.com...
>> Henry Kolesnik wrote:
>>> I got a couple of the subject tubes which are supposed
>>> to be "glow modulator tubes". Best I can determine is
>>> that the light output will vary with current but I can't
>>> find data sheet googling. If anyone has pinout and/or
>>> data I'd sure like to see it. I think it might be a mid
>>> 1960s item as my 1957 Sylvania manual doesn't show it.
>>> thanks
>>>
>> I have a Sylania Technical Manual of tube data sheets
>> dated 1959 and have the blue add-ons to 1960, and that
>> tube is not listed anywhere in it.
>> Sorry.
>
> Hi Robert,
>
> I have some PDF's of scanned tube manuals(Eimac, Taylor
> RCA), I would love to trade a few for a pdf of the
> Sylvania Manuals. If interested email me.
>
> Cheers
>
There is a Sylvania tube manual on-line at:
http://www.pmillett.com/sylvania_tube_manuals_online.htm

However, it does not cover the R1131C

Lots of other good stuff on this site including several
RCA tube manuals and many books. All in PDF form but _very_
large files.

--
---
Richard Knoppow
Los Angeles, CA, USA
dickburk@ix.netcom.com

## 392. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 03:38:07 UTC
From: donald <Donald@dontdoithere.com>
Message-ID: <mo2dnV24ccKEtkLanZ2dnUVZ_q_inZ2d@comcast.com>
Source record: 5427
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

Henry Kolesnik wrote:
> Found another option which may be the least expensive and that is a
> DataWatch Elite M2000 temperature logger with LCD display and is RS232
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

Google can't find it, how about a link ?

donald
> but works with a conversion cable to USB. Come with software and can
> store 1,868 samples, sampling at 1 to 255 minutes with a real-time
> clock, -40F to +158F. Cost $45.00.. Replaceable lithium cell runs it
> for a year. I have a PDF spec sheet if anyone wants it, let know.
>

## 393. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 06:08:24 UTC
From: James Sweet <jamessweet@hotmail.com>
Message-ID: <s%IDj.8878$2Y4.5025@trndny01>
Source record: 5430
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

"William Noble" <nobody@nowhere.com> wrote in message
news:47ddfb82$0$26101$88260bb3@free.teranews.com...
> there is a plethora of data collection cards, I'd start there - why USB
> and not PCI? anyway, not my problem - do a search for "data collection
> cards"

PCI is going away if not already completely gone on new PCs, USB will be
here for quite a while in some form. USB also allows you to easily move the
device from one PC to another, and connect it to laptops.

## 394. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 07:25:40 UTC
From: T <nospam.kd1s@cox.nospam.net>
Message-ID: <MPG.2249387e8bed92298a7de@news.east.cox.net>
Source record: 5431
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

In article <47ddfb82$0$26101$88260bb3@free.teranews.com>,
nobody@nowhere.com says...
> there is a plethora of data collection cards, I'd start there - why USB and
> not PCI? anyway, not my problem - do a search for "data collection cards"
> you will find thngs like this www.superlogics.com/usb.asp

I think it's because more and more people are moving to laptops and USB,
IEEE-1394 and PC-Card's are the only ports available.

## 395. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 12:17:49 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <MpODj.1643$LV5.165@newssvr19.news.prodigy.net>
Source record: 5432
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.repair,rec.antiques.radio+phono

```
Donald
ask for one at www.global-sensors.com , they'll send you a PDF
hank
"donald" <Donald@dontdoithere.com> wrote in message
news:mo2dnV24ccKEtkLanZ2dnUVZ_q_inZ2d@comcast.com...
> Henry Kolesnik wrote:
>> Found another option which may be the least expensive and that is a
>> DataWatch Elite M2000 temperature logger with LCD display and is
>> RS232
> ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
>
> Google can't find it, how about a link ?
>
> donald
>> but works with a conversion cable to USB. Come with software and can
>> store 1,868 samples, sampling at 1 to 255 minutes with a real-time
>> clock, -40F to +158F. Cost $45.00.. Replaceable lithium cell runs it
>> for a year. I have a PDF spec sheet if anyone wants it, let know.
>>
>
```

## 396. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-18 16:14:59 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <_YRDj.33$%M6.12@newsfe07.lga>
Source record: 5433

"msg" <msg@_cybertheque.org_> wrote in message
news:13tr1ti35rp7p60@corp.supernews.com...
> nesesu wrote:
>
> <snip>
> Wow this is promiscuously cross-posted...

Thanks for pointing that out. I was about to say that this is
rec.radio.amateur.homebrew so why not build something. But apparently, it's
just buckshot

..

## 397. Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 03:10:19 UTC
From: Jim <nospam@nospam.com>
Message-ID: <1vh0u39ntvch3vi3981oqdmehf9jfmfsfg@4ax.com>
Source record: 5434

Can anyone recommend a simple schematic drawing CAD program, not one of the "do everything" programs that draws living rooms and skyscrapers, looking for a schematic-only program that does not have too steep a learning curve, and doesn't cost too much or is freeware or shareware that won't cost an arm or a leg.

What programs do you use and what are your likes/dislikes/wish list?

I'm trying to settle on something that I will probably only use occasionally to draw schematics of homebrew projects to file away or possibly submit for publication. Any suggestions appreciated.

I'm running Windows XP Pro.

Jim, WA5DXP

## 398. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 04:21:55 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <13u11me8ot3mi03@corp.supernews.com>
Source record: 5435

Jim wrote:

> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.
>
> What programs do you use and what are your likes/dislikes/wish list?
>
> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication. Any suggestions appreciated.
>
> I'm running Windows XP Pro.
>
> Jim, WA5DXP

I use 'xcircuit' (URL (may have changed): http://bach.ece.jhu.edu/~tim/programs/xcircuit/)

It needs X11 but you can install 'cygwin' on XP Pro and X11 and it
should run fine.

To see an example drawing please see my linear page:
http://www.cybertheque.org/homebrew/837_linear

Michael

# 399. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 05:39:36 UTC
From: Jim <kill-spam@no-spam.org>
Message-ID: <obCdncoAur2AOn3anZ2dnUVZ_rKtnZ2d@comcast.com>
Source record: 5436

Jim wrote:

> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.
>
> What programs do you use and what are your likes/dislikes/wish list?
>
> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication. Any suggestions appreciated.
>
> I'm running Windows XP Pro.
>
> Jim, WA5DXP

There is a schematic draw program that works under WINXP. It is
called TINYCAD.

http://tinycad.sourceforge.net/index.html

---

One nice detail is, it can generate a netlist that you could use with a
board layout program like FREEPCB.

http://www.freepcb.com/

==========
==========

A different program with a fairly steep learning curve has both a
schematic diagram and a powerful board layout program is KICAD.

http://www.lis.inpg.fr/realise_au_lis/kicad/

Tinycad is probably a nice answer for an easy to learn schematic program,
I included the other two programs as general information in case somebody
wants to also do board layouts....

Jim Pennell
N6BIU

--

22:40 Pacific Time Zone
Mar 18 2008

International Time
05:40 UTC
19.03.2008

## 400. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 07:42:57 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.03.19.07.42.57.928813@localhost.localdomain>
Source record: 5437

Hi,

On Tue, 18 Mar 2008 22:10:19 -0500, Jim wrote:

> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication.

Try using there with M$ Paint:
http://geek.scorpiorising.ca/symbols.html

Cheers!

# 401. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 08:07:09 UTC
From: SamSvL <samsvl@nlr.nl>
Message-ID: <Xns9A665C970BF9Csamsvlnlrnl@192.87.166.15>
Source record: 5438

Jim <nospam@nospam.com> wrote in news:1vh0u39ntvch3vi3981oqdmehf9jfmfsfg@4ax.com:

> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.
>
> What programs do you use and what are your likes/dislikes/wish list?
>
> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication. Any suggestions appreciated.
>
> I'm running Windows XP Pro.
>
> Jim, WA5DXP
>
>
>

TINA_TI (http://focus.ti.com/docs/toolsw/folders/print/tina-ti.html) gives you simulation in the same package, and easy to learn.

Sam

# 402. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 10:18:49 UTC
From: Keith Dysart <Keith.Dysart@gmail.com>
Message-ID: <9f21e4e5-ffa6-4bce-b5f8-d4bdf2d5dcae@e39g2000hsf.googlegroups.com>
Source record: 5439

```
On Mar 18, 11:10 pm, Jim <nos...@nospam.com> wrote:
> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.

LTspice does schematics as a side effect of simulation. Free.
http://www.linear.com/designtools/software/switchercad.jsp

...Keith
```

# 403. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 12:01:40 UTC
From: Jim <nospam@nospam.com>
Message-ID: <5402u3hi1c6qu7iapabj95aaprkl9kiv4j@4ax.com>
Source record: 5440

That is a beautiful schematic diagram. Jim

On Tue, 18 Mar 2008 22:21:55 -0600, msg <msg@_cybertheque.org_> wrote:

>Jim wrote:
>
>> Can anyone recommend a simple schematic drawing CAD program, not one
>> of the "do everything" programs that draws living rooms and
>> skyscrapers, looking for a schematic-only program that does not have
>> too steep a learning curve, and doesn't cost too much or is freeware
>> or shareware that won't cost an arm or a leg.
>>
>> What programs do you use and what are your likes/dislikes/wish list?
>>
>> I'm trying to settle on something that I will probably only use
>> occasionally to draw schematics of homebrew projects to file away or
>> possibly submit for publication. Any suggestions appreciated.
>>
>> I'm running Windows XP Pro.
>>
>> Jim, WA5DXP
>
>
>I use 'xcircuit' (URL (may have changed):
http://bach.ece.jhu.edu/~tim/programs/xcircuit/)
>
>It needs X11 but you can install 'cygwin' on XP Pro and X11 and it
>should run fine.
>
>To see an example drawing please see my linear page:
>http://www.cybertheque.org/homebrew/837_linear
>
>Michael

# 404. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 12:07:26 UTC
From: Jim <nospam@nospam.com>
Message-ID: <r902u3p0hhhmv2q1c21d3rne7d82id3qrs@4ax.com>
Source record: 5441

Dear Fellows;

Thanks for the good leads, I'll be busy next few days trying out these programs. Thanks again for your help.

On Wed, 19 Mar 2008 03:18:49 -0700 (PDT), Keith Dysart <Keith.Dysart@gmail.com> wrote:

>On Mar 18, 11:10ï¿½pm, Jim <nos...@nospam.com> wrote:
>> Can anyone recommend a simple schematic drawing CAD program, not one
>> of the "do everything" programs that draws living rooms and
>> skyscrapers, looking for a schematic-only program that does not have
>> too steep a learning curve, and doesn't cost too much or is freeware
>> or shareware that won't cost an arm or a leg.
>
>LTspice does schematics as a side effect of simulation. Free.
>http://www.linear.com/designtools/software/switchercad.jsp
>
>...Keith

# 405. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 15:18:00 UTC
From: Brian Collett <bcollett@hamilton.edu>
Message-ID: <bcollett-01E736.11175019032008@news.hamilton.edu>
Source record: 5442

In article <1vh0u39ntvch3vi3981oqdmehf9jfmfsfg@4ax.com>,
Jim <nospam@nospam.com> wrote:

> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.
>
> What programs do you use and what are your likes/dislikes/wish list?
>
> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication. Any suggestions appreciated.
>
> I'm running Windows XP Pro.
>
> Jim, WA5DXP

One that no-one else seems to have suggested is the PCB/Schematic
package from ExpressPCB.com. This is a freeware package for Windows that
is very easy to use (no Cygwin baggage). It can export to bitmaps in
various resolutions or to Windows metafile. Obviously it can also export
to the PCB program, which is also very nice, but you don't need to use
that part of you don't need.
Brian.
Disclaimer: I have no connection with ExpressPCB other than being a very
satisfied customer for about 5 years.

# 406. Re: 4CX1500B Plate Voltages SSB/CW-RTTY

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 22:10:23 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <kbgEj.29434$QC.19515@newsfe20.lga>
Source record: 5443

"Jim" <nospam@nospam.com> wrote in message
news:3g9ut31g4tqkbpcdotticoroq0e4hlc3io@4ax.com...
> Gerry;
>
> Thanks for the link. The SB220 had a tap on primary, so when you
> switched to CW/RTTY you did not have to retune the amp,
> which was probably done by others.
>
> I'll check out the site.
>
> Jim
>
>
>
As a note, for information...

The SB-20 was designed to meet the old FCC regulations which
dictated power input, not RF output.

73, Pete

# 407. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-19 22:37:28 UTC
From: Jim <nospam@nospam.com>
Message-ID: <as43u3hq6ljolpocptpjlr6qmii9p22fq6@4ax.com>
Source record: 5444

Brian;

I came across that one last night and have it installed and testing it. The only thing is I could not find a symbol for a terminal strip. Also, can you tell me how to place a heavy DOT where two lines intersect on the schematic where they are supposed to join?
Is there a place where you can find more symbols for it? I think in a few hours time one could become proficient in it. I still need to learn how to adjust sizes and get the text to align inside the symbols correctly, it's not automatic centering. I'm probably doing something wrong... maybe I should read the instructions as a last resort.. he he..

I also have TINYCAD installed and have not tried it yet.

The good part you just do the PCB part and send it off and receive your PCB in a few days.... he he... So far it's easy to use. I also have the others mentioned except the first one, could not understand what CYGWIN is, but the schematic sure was a beauty. There is a WINDOWS .EXE version, but the say it's not debugged and I think you need to install other programs which I have no clue about, so was afraid to install it.

Thanks to all.

On Wed, 19 Mar 2008 11:18:00 -0400, Brian Collett
<bcollett@hamilton.edu> wrote:

>In article <1vh0u39ntvch3vi3981oqdmehf9jfmfsfg@4ax.com>,
> Jim <nospam@nospam.com> wrote:
>
>> Can anyone recommend a simple schematic drawing CAD program, not one
>> of the "do everything" programs that draws living rooms and
>> skyscrapers, looking for a schematic-only program that does not have
>> too steep a learning curve, and doesn't cost too much or is freeware
>> or shareware that won't cost an arm or a leg.
>>
>> What programs do you use and what are your likes/dislikes/wish list?
>>
>> I'm trying to settle on something that I will probably only use
>> occasionally to draw schematics of homebrew projects to file away or
>> possibly submit for publication. Any suggestions appreciated.
>>
>> I'm running Windows XP Pro.
>>

>> Jim, WA5DXP
>
>One that no-one else seems to have suggested is the PCB/Schematic
>package from ExpressPCB.com. This is a freeware package for Windows that
>is very easy to use (no Cygwin baggage). It can export to bitmaps in
>various resolutions or to Windows metafile. Obviously it can also export
>to the PCB program, which is also very nice, but you don't need to use
>that part of you don't need.
>Brian.
>Disclaimer: I have no connection with ExpressPCB other than being a very
>satisfied customer for about 5 years.

# 408. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-20 00:51:44 UTC
From: john jardine <john.jardine@idnet.co.uk>
Message-ID: <wyiEj.5845$yq3.3871@en-nntp-07.am2.easynews.com>
Source record: 5445

"Jim" <nospam@nospam.com> wrote in message
news:1vh0u39ntvch3vi3981oqdmehf9jfmfsfg@4ax.com...
> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.
>
> What programs do you use and what are your likes/dislikes/wish list?
>
> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication. Any suggestions appreciated.
>
> I'm running Windows XP Pro.
>
> Jim, WA5DXP
>
>
>
Had a similar need for nice drawings to record the occasional personal
project that I'd somehow managed to complete. My PCBs are done by a PCB guy
so I just wanted a straightforward circuit drawing prog' and not some
bloated chimera of a full-blown PCB design package.
Prog' needed to understand what a wire/connection is and that connected up
components will get moved about on a drawing. Ended up with 'TinyCad'.

New libary components are easy to draw and a drawing is quick to connect up
and edit. Will save as a '.PNG' file so anyone can view it. Has one or two
oddities but costs nothing, is small sized and quick to learn.
http://img216.imageshack.us/img216/7565/50mhzimpedancemeteruv2.png
is an example drawing.
It's obvious I'm European as the transistors have those strange circles
round 'em and those resistors and capacitors look odd :) but you'll get the
drift as to the kind of graphic elements that can be easily added to a
drawing.
There's also a Tinycad group on Yahoo, where a number of extra symbol
libraries are available. (including one of mine :)

# 409. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-20 03:38:44 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <8bOdnRtaTpWEU3zanZ2dnUVZ_judnZ2d@giganews.com>
Source record: 5446

Jim wrote:
> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.
>
> What programs do you use and what are your likes/dislikes/wish list?
>
> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication. Any suggestions appreciated.
>
> I'm running Windows XP Pro.
>
> Jim, WA5DXP

Hi Jim,

Along with the others mentioned, Eagle (http://www.cadsoftusa.com/) is a schematic capture and PCB layout package that's free for personal use (with some limitations). The learning curve might be a bit steep but the price is right, and it'll produce photoplot files for your favorite PCB house.

For occaisional & simple drawing, you can also use Visio (comes with some electronic symbols). For example, I drew this in Visio and "printed" it to PDF:
http://www.geocities.com/bswadener/temp/sb220_relay-driver-soft-start.pdf.

Bryan WA7PRC

# 410. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-20 12:59:06 UTC
From: Jim <nospam@nospam.com>
Message-ID: <crn4u3ti31n38c2p779s1ljnj8d55su29l@4ax.com>
Source record: 5447

I have it installed and will search out the Yahoo group for the
extra libraries. Looking for a terminal strip now... he he..

Jim

On Thu, 20 Mar 2008 00:51:44 -0000, "john jardine"
<john.jardine@idnet.co.uk> wrote:

>
>"Jim" <nospam@nospam.com> wrote in message
>news:1vh0u39ntvch3vi3981oqdmehf9jfmfsfg@4ax.com...
>> Can anyone recommend a simple schematic drawing CAD program, not one
>> of the "do everything" programs that draws living rooms and
>> skyscrapers, looking for a schematic-only program that does not have
>> too steep a learning curve, and doesn't cost too much or is freeware
>> or shareware that won't cost an arm or a leg.
>>
>> What programs do you use and what are your likes/dislikes/wish list?
>>
>> I'm trying to settle on something that I will probably only use
>> occasionally to draw schematics of homebrew projects to file away or
>> possibly submit for publication. Any suggestions appreciated.
>>
>> I'm running Windows XP Pro.
>>
>> Jim, WA5DXP
>>
>>
>>
>Had a similar need for nice drawings to record the occasional personal
>project that I'd somehow managed to complete. My PCBs are done by a PCB guy
>so I just wanted a straightforward circuit drawing prog' and not some
>bloated chimera of a full-blown PCB design package.
>Prog' needed to understand what a wire/connection is and that connected up
>components will get moved about on a drawing. Ended up with 'TinyCad'.
>
>New libary components are easy to draw and a drawing is quick to connect up
>and edit. Will save as a '.PNG' file so anyone can view it. Has one or two
>oddities but costs nothing, is small sized and quick to learn.
>http://img216.imageshack.us/img216/7565/50mhzimpedancemeteruv2.png
>is an example drawing.
>It's obvious I'm European as the transistors have those strange circles
>round 'em and those resistors and capacitors look odd :) but you'll get the
>drift as to the kind of graphic elements that can be easily added to a

>drawing.
>There's also a Tinycad group on Yahoo, where a number of extra symbol
>libraries are available. (including one of mine :)
>

# 411. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-20 13:09:59 UTC
From: Jim <nospam@nospam.com>
Message-ID: <ktn4u31jbn6i2rvsu1c3tu398s25pubt8b@4ax.com>
Source record: 5448

Bryan;

You are the second person to recommend Visio, one by a local ham
friend who is a network professional and ardent homebrewer. I went
to Visio site, and ended up looking at what I think is a plugin
called Electra 2005, which I think is some kind of enhancement
or such. It's a real bargain at $799.00.... he he...

I will install Visio tonight and give it a try too, can you point me
to additional symbol libraries for it or can you create your own?

Someone above (geek) sent me a .zip file with thousands of symbols
that
could possibly be imported. So far I have:

Smart Draw
Tiny Cad
Express SCH and Express PCB
Geek symbols for use with paint program

installed thanks to all your kind help.

Let the trials begin...

Jim

On Wed, 19 Mar 2008 19:38:44 -0800, "Bryan"
<bryan.swadenerNOSPAM@comcast.net> wrote:

>Jim wrote:
>> Can anyone recommend a simple schematic drawing CAD program, not one
>> of the "do everything" programs that draws living rooms and
>> skyscrapers, looking for a schematic-only program that does not have
>> too steep a learning curve, and doesn't cost too much or is freeware
>> or shareware that won't cost an arm or a leg.
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>> What programs do you use and what are your likes/dislikes/wish list?
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>> I'm trying to settle on something that I will probably only use
>> occasionally to draw schematics of homebrew projects to file away or
>> possibly submit for publication. Any suggestions appreciated.
>>
>> I'm running Windows XP Pro.
>>
>> Jim, WA5DXP
>

>Hi Jim,
>
>Along with the others mentioned, Eagle (http://www.cadsoftusa.com/) is a
>schematic capture and PCB layout package that's free for personal use (with
>some limitations). The learning curve might be a bit steep but the price is
>right, and it'll produce photoplot files for your favorite PCB house.
>
>For occaisional & simple drawing, you can also use Visio (comes with some
>electronic symbols). For example, I drew this in Visio and "printed" it to
>PDF:
>http://www.geocities.com/bswadener/temp/sb220_relay-driver-soft-start.pdf.
>
>Bryan WA7PRC
>

# 412. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-20 13:28:09 UTC
From: Brian Collett <bcollett@hamilton.edu>
Message-ID: <bcollett-74013B.09280720032008@news.hamilton.edu>
Source record: 5449

Referring to ExpressPCB

In article <as43u3hq6ljolpocptpjlr6qmii9p22fq6@4ax.com>,
Jim <nospam@nospam.com> wrote:

> Brian;
>
> I came across that one last night and have it installed and testing
> it. The only thing is I could not find a symbol for a terminal strip.
> Also, can you tell me how to place a heavy DOT where two lines
> intersect on the schematic where they are supposed to join?
> Is there a place where you can find more symbols for it? I think in a
> few hours time one could become proficient in it. I still need to
> learn how to adjust sizes and get the text to align inside the symbols
> correctly, it's not automatic centering. I'm probably doing something
> wrong... maybe I should read the instructions as a last resort.. he
> he..
>

I don't have a solution for the dot problem because I prefer the
convention that says that four-way crosses are noni-ntersecting and use
staggered T-junctions for places where 4 wires meet--less chance to
confuse my students.
For a terminal strip you can us pretty much any connector type, since
the connectors are basically just named points on the sheet, or just
build your own to make it look the way you want. It is really easy to
create new components and put them in the library.
And, yes, you probably should look at the instructions. They tend to be
concise and complete.
Brian.

# 413. FA: NOS NATIONAL COIL FORMS + STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-21 02:51:51 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <bpFEj.27932$D_3.6130@bgtnsc05-news.ops.worldnet.att.net>
Source record: 5301

NOS NATIONAL RADIO COIL FORMS: XR 61, 70, & 71 + OTHER CATALOGS &
THINGS: see at:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

TNX Heytubeguy

# 414. Re: Schematic Drawing Software - Something simple with no steep learning curve

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-21 03:26:57 UTC
From: Smakutus Maximus <no.spam@my.pants>
Message-ID: <U1FEj.58$qi6.39@newsfe05.lga>
Source record: 5450

Jim wrote:
> Can anyone recommend a simple schematic drawing CAD program, not one
> of the "do everything" programs that draws living rooms and
> skyscrapers, looking for a schematic-only program that does not have
> too steep a learning curve, and doesn't cost too much or is freeware
> or shareware that won't cost an arm or a leg.
>
> What programs do you use and what are your likes/dislikes/wish list?
>
> I'm trying to settle on something that I will probably only use
> occasionally to draw schematics of homebrew projects to file away or
> possibly submit for publication. Any suggestions appreciated.
>
> I'm running Windows XP Pro.
>
> Jim, WA5DXP
>
>
>

Try DIYLayout:
http://www.storm-software.co.yu/diy/index.php

It was originally designed for DIY guitar effects, but as it's maturing
you can do a lot more than that with it.
It's completely free and extremely easy to use.
I think it's only for Windowz, so you Mac guys are on your own. ;D

Cheers,
- JJG

## 415. Bliley 100 kc BG9D crystal follow-up.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-21 22:57:27 UTC
From: novatech@eskimo.com
Message-ID: <fs1egn0ru8@enews2.newsguy.com>
Source record: 5302
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I cobbled up a two transistor oscillator, essentially copied from an Atlas 210 Transciever schematic, to run the BG9D I got on Ebay while back. The circuit is here:

http://novatech-instr.com/Fun/Crystals/bliley_q.jpg

I took an old octal based capacitor, emptied the insides and wound 106 turns (53 bifilar) of #27 wire on the aluminum case. This is the heater. About 1 amp heated nicely to 70C. I used some hot-water pipe insulator to cover it. An LM61 is used as a temp sensor. (epoxied to the can) (I'll put up the temp controller schematic when I remember)

It is hard to set much closer than about +/-1ppm (needs a better multiturn capacitor), but it is stable (short term) to better than +/-.01ppm. That's pretty nice, but other than the fun of building it, the performance is pretty useless. Roughly the equivalent of building a crystal radio set.

I am going to replace the transistor with a 12AT7, just for show, and call this little experiment done.

Steve.
--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

## 416. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 03:18:48 UTC
From: hexter@blazenet.net
Message-ID: <47e47a97$0$11007$470ef3ce@news.pa.net>
Source record: 5303
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

In article <f%XCj.32304$J41.13043@newssvr14.news.prodigy.net>,
kolesnik@nojunksbcglobal.net says...
>
>I got a couple of the subject tubes which are supposed to be "glow
>modulator tubes". Best I can determine is that the light output will
>vary with current but I can't find data sheet googling. If anyone has
>pinout and/or data I'd sure like to see it. I think it might be a mid
>1960s item as my 1957 Sylvania manual doesn't show it.
>thanks
>
>--
>
>73
>Hank WD5JFR

Everyone replies, and yet you get no answers,

R-1131C,D
Max dcv 150
ma. 3-25
peak ma. 55
starting voltage 225
crater dia. .093
candelpower .2@25 ma.
light color white

## 417. 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 08:49:35 UTC
From: Jean-Daniel HB9AKQ <cianajd@bluewin.ch>
Message-ID: <e59019b4-93c3-4596-9eda-f2f9895508cb@a23g2000hsc.googlegroups.com>
Source record: 5304

Hello,

I am in the process of choosing a technology for a crystal filter in that frequency range. I am facing the choice of buying a filter and paying the price, or to build a filter myself.

The questions I am facing are these:
1) Do the MQF (Monolytic Crystal Filter) withstand high level signals, like 1 mW or more, and what is their shape on the frequency domain (do they go steeply down and do they have parasitic responses) ?

2) I am actually ready to try one of the lattice crystal filters as described by Rhode in his may 1981 article (I can send you a copy for the asking), where there are 4 crystals in 2 pairs separated in frequency by about the 2 thirds of the desired passband. I would find the crystals by sorting out batches of crystals on the frequency meter. One can put 2 of these filters in series separated by a 1-dB resistive pad (8 crystals total). Any experience to report on these filters?

3) How good are ladder filters with overtone crystals? I do know that ladder filters with such crystals are excellent on their fundamental (3rd overtone crystals), but can you have them filter on the overtone, with a tuned circuit up front ?

Thanks for the comments
Jean-Daniel HB9AKQ

## 418. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 15:17:28 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <b0a6251e-c8f6-4f37-a3c1-fa5c47cce026@n77g2000hse.googlegroups.com>
Source record: 5305

On Mar 22, 9:49 am, Jean-Daniel HB9AKQ <cian...@bluewin.ch> wrote:
> Hello,
>
> I am in the process of choosing a technology for a crystal filter in
> that frequency range. I am facing the choice of buying a filter and
> paying the price, or to build a filter myself.
>
> The questions I am facing are these:
> 1) Do the MQF (Monolytic Crystal Filter) withstand high level signals,
> like 1 mW or more, and what is their shape on the frequency domain (do
> they go steeply down and do they have parasitic responses) ?
>
> 2) I am actually ready to try one of the lattice crystal filters as
> described by Rhode in his may 1981 article (I can send you a copy for
> the asking), where there are 4 crystals in 2 pairs separated in
> frequency by about the 2 thirds of the desired passband. I would find
> the crystals by sorting out batches of crystals on the frequency
> meter. One can put 2 of these filters in series separated by a 1-dB
> resistive pad (8 crystals total). Any experience to report on these
> filters?
>
> 3) How good are ladder filters with overtone crystals? I do know that
> ladder filters with such crystals are excellent on their fundamental
> (3rd overtone crystals), but can you have them filter on the overtone,
> with a tuned circuit up front ?

It's quite easy to buy 40 MHz fundamental crystals, which could be
used for a ladder filter.

## 419. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 15:50:09 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <fs39rh$hhk$1@theodyn.ncf.ca>
Source record: 5306

Jean-Daniel HB9AKQ (cianajd@bluewin.ch) writes:
> Hello,
>
> I am in the process of choosing a technology for a crystal filter in
> that frequency range. I am facing the choice of buying a filter and
> paying the price, or to build a filter myself.
>
Are you hoping/expecting to get a narrow filter out of this, or will
it be a roofing filter, with the real selectivity at a different frequency?

I thought there were limitations on selectivity at those frequencies.
I can't recall ever seeing a narrow filter up there (and while it's been a
long time since I read that QST article, which is the only article in
the ham magazines that I've seen about making crystal filters that high
up, I thought it addressed that issue).

If it's just a roofing filter you need, you can pull one out of an older
cellphone. The big clunky kind have parts that are recognizable.

Michael VE2BVW

# 420. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 17:58:35 UTC
From: Jean-Daniel HB9AKQ <cianajd@bluewin.ch>
Message-ID: <7db57f69-6368-4c68-9f6d-5addae5f04be@d62g2000hsf.googlegroups.com>
Source record: 5307

On 22 mar, 16:17, Leon <leon...@btinternet.com> wrote:
> On Mar 22, 9:49 am, Jean-Daniel HB9AKQ <cian...@bluewin.ch> wrote:
>
>
>
>
>
> > Hello,
>
> > I am in the process of choosing a technology for a crystal filter in
> > that frequency range. I am facing the choice of buying a filter and
> > paying the price, or to build a filter myself.
>
> > The questions I am facing are these:
> > 1) Do the MQF (Monolytic Crystal Filter) withstand high level signals,
> > like 1 mW or more, and what is their shape on the frequency domain (do
> > they go steeply down and do they have parasitic responses) ?
>
> > 2) I am actually ready to try one of the lattice crystal filters as
> > described by Rhode in his may 1981 article (I can send you a copy for
> > the asking), where there are 4 crystals in 2 pairs separated in
> > frequency by about the 2 thirds of the desired passband. I would find
> > the crystals by sorting out batches of crystals on the frequency
> > meter. One can put 2 of these filters in series separated by a 1-dB
> > resistive pad (8 crystals total). Any experience to report on these
> > filters?
>
> > 3) How good are ladder filters with overtone crystals? I do know that
> > ladder filters with such crystals are excellent on their fundamental
> > (3rd overtone crystals), but can you have them filter on the overtone,
> > with a tuned circuit up front ?
>
> It's quite easy to buy 40 MHz fundamental crystals, which could be
> used for a ladder filter.- Masquer le texte des messages précédents -
>
> - Afficher le texte des messages précédents -

Oh, I'll check that out, the highest I saw was around 24MHz at 1mW,
but I also quite a few at Digikey's going to 50MHz,but I do not know
if they are overtone or not. In any case they withstand only 50 or 200
uW, which is not enough for an up-conversion roofing filter that gets
dBm galore

## 421. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 18:05:15 UTC
From: Jean-Daniel HB9AKQ <cianajd@bluewin.ch>
Message-ID: <07820930-92ee-4b34-9910-6e1bb97dbcc3@e39g2000hsf.googlegroups.com>
Source record: 5308

On 22 mar, 16:50, et...@FreeNet.Carleton.CA (Michael Black) wrote:
> Jean-Daniel HB9AKQ (cian...@bluewin.ch) writes:
> > Hello,
>
> > I am in the process of choosing a technology for a crystal filter in
> > that frequency range. I am facing the choice of buying a filter and
> > paying the price, or to build a filter myself.
>
> Are you hoping/expecting to get a narrow filter out of this, or will
> it be a roofing filter, with the real selectivity at a different frequency?
>
> I thought there were limitations on selectivity at those frequencies.
> I can't recall ever seeing a narrow filter up there (and while it's been a
> long time since I read that QST article, which is the only article in
> the ham magazines that I've seen about making crystal filters that high
> up, I thought it addressed that issue).
>
> If it's just a roofing filter you need, you can pull one out of an older
> cellphone.  The big clunky kind have parts that are recognizable.
>
>    Michael  VE2BVW

Hello, I need a roofing filter with a few kHz wide that can withstand
1dBm or a little more.
I am not sure that the MQF you find on the market or in older
cellphones can do that. The frequency should be between 45 and 80 MHz
and the price should be right. What is your experience on this?

Thanks
Jean-Daniel HB9AKQ

## 422. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 18:38:23 UTC
From: JosephKK <quiettechblue@yahoo.com>
Message-ID: <sakau35rgpjhslubpkc8s3eeks6n61iec9@4ax.com>
Source record: 5309
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

On Mon, 17 Mar 2008 19:48:06 -0700, "Richard Knoppow"
<dickburk@ix.netcom.com> wrote:

>
>"Martin Riddle" <martin_rid@verizon.net> wrote in message
>news:PjEDj.2253$jw2.67@trndny04...
>>
>> "Robert Baer" <robertbaer@localnet.com> wrote in message
>> news:13tp4egkuf3sb69@corp.supernews.com...
>>> Henry Kolesnik wrote:
>>>> I got a couple of the subject tubes which are supposed
>>>> to be "glow modulator tubes". Best I can determine is
>>>> that the light output will vary with current but I can't
>>>> find data sheet googling. If anyone has pinout and/or
>>>> data I'd sure like to see it. I think it might be a mid
>>>> 1960s item as my 1957 Sylvania manual doesn't show it.
>>>> thanks
>>>>
>>> I have a Sylania Technical Manual of tube data sheets
>>> dated 1959 and have the blue add-ons to 1960, and that
>>> tube is not listed anywhere in it.
>>> Sorry.
>>
>> Hi Robert,
>>
>> I have some PDF's of scanned tube manuals(Eimac, Taylor
>> RCA), I would love to trade a few for a pdf of the
>> Sylvania Manuals. If interested email me.
>>
>> Cheers
>>
> There is a Sylvania tube manual on-line at:
>http://www.pmillett.com/sylvania_tube_manuals_online.htm
>
>However, it does not cover the R1131C
>
> Lots of other good stuff on this site including several
>RCA tube manuals and many books. All in PDF form but _very_
>large files.

Pretty good, but not my idea of big files. That starts with very full
CD images and up. I do not bat an eye at downloading full multiple
DVD distributions of Linux. I have dual layer rewriters and media as
well.

## 423. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-22 21:16:27 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <eomdnd7r5L-96njanZ2dnUVZ_o3inZ2d@web-ster.com>
Source record: 5310

Jean-Daniel HB9AKQ wrote:
> On 22 mar, 16:17, Leon <leon...@btinternet.com> wrote:
>> On Mar 22, 9:49 am, Jean-Daniel HB9AKQ <cian...@bluewin.ch> wrote:
>>
>>
>>
>>
>>
>>> Hello,
>>> I am in the process of choosing a technology for a crystal filter in
>>> that frequency range. I am facing the choice of buying a filter and
>>> paying the price, or to build a filter myself.
>>> The questions I am facing are these:
>>> 1) Do the MQF (Monolytic Crystal Filter) withstand high level signals,
>>> like 1 mW or more, and what is their shape on the frequency domain (do
>>> they go steeply down and do they have parasitic responses) ?
>>> 2) I am actually ready to try one of the lattice crystal filters as
>>> described by Rhode in his may 1981 article (I can send you a copy for
>>> the asking), where there are 4 crystals in 2 pairs separated in
>>> frequency by about the 2 thirds of the desired passband. I would find
>>> the crystals by sorting out batches of crystals on the frequency
>>> meter. One can put 2 of these filters in series separated by a 1-dB
>>> resistive pad (8 crystals total). Any experience to report on these
>>> filters?
>>> 3) How good are ladder filters with overtone crystals? I do know that
>>> ladder filters with such crystals are excellent on their fundamental
>>> (3rd overtone crystals), but can you have them filter on the overtone,
>>> with a tuned circuit up front ?
>> It's quite easy to buy 40 MHz fundamental crystals, which could be
>> used for a ladder filter.- Masquer le texte des messages pri¿½ci¿½dents -
>>
>> - Afficher le texte des messages pri¿½ci¿½dents -
>
> Oh, I'll check that out, the highest I saw was around 24MHz at 1mW,
> but I also quite a few at Digikey's going to 50MHz,but I do not know
> if they are overtone or not. In any case they withstand only 50 or 200
> uW, which is not enough for an up-conversion roofing filter that gets
> dBm galore

The power ratings on crystals are their allowable _dissipation_, not the
amount that can be going _through_ them. So you want to look at the
amount of power being lost in the filter to estimate capabilities, not
the amount of power being dissipated at your load.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

## 424. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 03:14:12 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <fs4hu4$9il$1@theodyn.ncf.ca>
Source record: 5311

Jean-Daniel HB9AKQ (cianajd@bluewin.ch) writes:
> On 22 mar, 16:50, et...@FreeNet.Carleton.CA (Michael Black) wrote:
>> Jean-Daniel HB9AKQ (cian...@bluewin.ch) writes:
>> > Hello,
>>
>> > I am in the process of choosing a technology for a crystal filter in
>> > that frequency range. I am facing the choice of buying a filter and
>> > paying the price, or to build a filter myself.
>>
>> Are you hoping/expecting to get a narrow filter out of this, or will
>> it be a roofing filter, with the real selectivity at a different frequency=
> ?
>>
>> I thought there were limitations on selectivity at those frequencies.
>> I can't recall ever seeing a narrow filter up there (and while it's been a=
>
>> long time since I read that QST article, which is the only article in
>> the ham magazines that I've seen about making crystal filters that high
>> up, I thought it addressed that issue).
>>
>> If it's just a roofing filter you need, you can pull one out of an older
>> cellphone. =A0The big clunky kind have parts that are recognizable.
>>
>> =A0 =A0Michael =A0VE2BVW
>

> Hello, I need a roofing filter with a few kHz wide that can withstand
> 1dBm or a little more.
> I am not sure that the MQF you find on the market or in older
> cellphones can do that. The frequency should be between 45 and 80 MHz
> and the price should be right. What is your experience on this?
>
But then it's not really a roofing filter.

That term applies to a filter used after the first mixer to limit
the passband but which doesn't provide ultimate selectivity.

My point was that I wonder if you can get a few KHz of selectivity
up there. Otherwise, we'd surely see it in commercial equipment
and even home made. All the design books decades ago would say the
best design is to put the ultimate selectivity right after the first
mixer of a receiver, yet as receiver design changed to put the first
IF in the 45 to 70MHz range, I've never seen an instance of a narrow
filter right after the first mixer.

I don't know whether it can be done, but the fact that it isn't done suggests there are limitations.

The filters in a cellphone would be wide enough for FM, and given that all the cellphones I've seen convert to a lower frequency where there is another filter, they probably are relatively loose filters up at 45MHz or so.

MIchael VE2BVW

# 425. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 03:53:51 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <kvkFj.36984$QC.2852@newsfe20.lga>
Source record: 5312

"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message news:fs4hu4 >
> That term applies to a filter used after the first mixer to limit
> the passband but which doesn't provide ultimate selectivity.
>
> My point was that I wonder if you can get a few KHz of selectivity
> up there. Otherwise, we'd surely see it in commercial equipment
> and even home made. All the design books decades ago would say the
> best design is to put the ultimate selectivity right after the first
> mixer of a receiver, yet as receiver design changed to put the first
> IF in the 45 to 70MHz range, I've never seen an instance of a narrow
> filter right after the first mixer.
>
> I don't know whether it can be done, but the fact that it isn't done
> suggests there are limitations.
>
> The filters in a cellphone would be wide enough for FM, and given that
> all the cellphones I've seen convert to a lower frequency where there
> is another filter, they probably are relatively loose filters up at
> 45MHz or so.
>
> MIchael VE2BVW

Michael,

I am not up on this, but I believe narrow BW roofing filters are now
being marketed for many rigs. InRad has some, and I am pretty sure
TenTec offers them.

Pete
>

## 426. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 16:06:02 UTC
From: Edward Feustel <efeustel@hughes.net>
Message-ID: <6sucu397pu8tflfi7689drjh3rvf3a5qk3@4ax.com>
Source record: 5313

On Sat, 22 Mar 2008 23:53:51 -0400, "Tio Pedro"
<radioconnection@cox.net> wrote:

>
>"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message news:fs4hu4 >
>> That term applies to a filter used after the first mixer to limit
>> the passband but which doesn't provide ultimate selectivity.
>>
>> My point was that I wonder if you can get a few KHz of selectivity
>> up there. Otherwise, we'd surely see it in commercial equipment
>> and even home made. All the design books decades ago would say the
>> best design is to put the ultimate selectivity right after the first
>> mixer of a receiver, yet as receiver design changed to put the first
>> IF in the 45 to 70MHz range, I've never seen an instance of a narrow
>> filter right after the first mixer.
>>
>> I don't know whether it can be done, but the fact that it isn't done
>> suggests there are limitations.
>>
>> The filters in a cellphone would be wide enough for FM, and given that
>> all the cellphones I've seen convert to a lower frequency where there
>> is another filter, they probably are relatively loose filters up at
>> 45MHz or so.
>>
>> MIchael VE2BVW
>
>Michael,
>
>I am not up on this, but I believe narrow BW roofing filters are now
>being marketed for many rigs. InRad has some, and I am pretty sure
>TenTec offers them.
>
>Pete
>>
>
Pete,
The Ten Tec Transciever filters are at 9 MHz except in the "general
coverage up convert" receivers. in which case they are not narrow at
all.

Note that INRAD offers roofing filters 4-5 KHz wide at VHF frequencies
from 40 to 73 MHz ( see page 13 of their catalog ) with i/o impedances
of 50 ohms : http://www.inrad.net/inrad.php?mode=catalog

Ed, N5EI

## 427. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 16:11:46 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <6jvFj.45886$097.16133@newsfe21.lga>
Source record: 5314

"Edward Feustel" <efeustel@hughes.net> wrote in message news: > > Pete,
> The Ten Tec Transciever filters are at 9 MHz except in the "general
> coverage up convert" receivers. in which case they are not narrow at
> all.
>
> Note that INRAD offers roofing filters 4-5 KHz wide at VHF frequencies
> from 40 to 73 MHz ( see page 13 of their catalog ) with i/o impedances
> of 50 ohms : http://www.inrad.net/inrad.php?mode=catalog
>
> Ed, N5EI

Thanks Ed, I haven't kept with this at all. The INRAD 4 to 5 kHz BW roofing filters sound very interesting though. A lot better than the 18-kHz BW 40.455-MHz monolythics I've played with in the past.

Pete

## 428. 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 17:16:52 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <d5ce3035-b5a1-461e-989c-2076f2c0140d@u10g2000prn.googlegroups.com>
Source record: 5315

Looking at how I would configure a 7360-type mixer in the front end of a low-band (say 80M and 40M) receiver.

Method A: To me, the most obvious way to do it is to feed the RF into the 7360's grid, and feed the deflection plates with balanced local oscillator input at circa 10 or 20 V P-P. Put a center-tapped transformer to the anodes and pull the output out of a winding.

BUT... that's not what I see being done in the various app notes.

Method B: I see, for example, feeding RF into a single deflection plate, and putting a pot for fine-tuning the balance on the other plate. LO is injected into the 7360's grid. (e.g. page 6 of http://www.ab4oj.com/1st/hb/7360/7360.pdf ). I think the intention here is not to saturate the deflector beam inputs into switching mode, but to keep the amplitudes small where it'll be linear.

What's the advantages and gotchas of doing it each way? Method A takes a lot of LO amplitude and has the highest gain for the RF. Method B takes less LO amplitude but I think has lower gain. Method A cancels out the LO, and Method B cancels out the original RF. Right?

Of course two 7360's would let me do a doubly-balanced mixer... can't afford 7360's but I do have some 6AR8's!

Tim N3QE.

## 429. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 23:46:50 UTC
From: Richard Knoppow <dickburk@ix.netcom.com>
Message-ID: <13udqvdloks0v68@corp.supernews.com>
Source record: 5316
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

"gudmundur" <hexter@blazenet.net> wrote in message
news:47e47a97$0$11007$470ef3ce@news.pa.net...
> In article
> <f%XCj.32304$J41.13043@newssvr14.news.prodigy.net>,
> kolesnik@nojunksbcglobal.net says...
>>
>>I got a couple of the subject tubes which are supposed to
>>be "glow
>>modulator tubes". Best I can determine is that the light
>>output will
>>vary with current but I can't find data sheet googling.
>>If anyone has
>>pinout and/or data I'd sure like to see it. I think it
>>might be a mid
>>1960s item as my 1957 Sylvania manual doesn't show it.
>>thanks
>>
>>--
>>
>>73
>>Hank WD5JFR
>
> Everyone replies, and yet you get no answers,
>
> R-1131C,D
> Max dcv 150
> ma. 3-25
> peak ma. 55
> starting voltage 225
> crater dia. .093
> candelpower .2@25 ma.
> light color white
>
What is the pin arrangement?

--
---
Richard Knoppow
Los Angeles, CA, USA
dickburk@ix.netcom.com

## 430. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 23:48:19 UTC
From: Richard Knoppow <dickburk@ix.netcom.com>
Message-ID: <13udr26kehk9g7a@corp.supernews.com>
Source record: 5317
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

"gudmundur" <hexter@blazenet.net> wrote in message
news:47e47a97$0$11007$470ef3ce@news.pa.net...
> In article
> <f%XCj.32304$J41.13043@newssvr14.news.prodigy.net>,
> kolesnik@nojunksbcglobal.net says...
>>
>>I got a couple of the subject tubes which are supposed to
>>be "glow
>>modulator tubes". Best I can determine is that the light
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>>vary with current but I can't find data sheet googling.
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>>pinout and/or data I'd sure like to see it. I think it
>>might be a mid
>>1960s item as my 1957 Sylvania manual doesn't show it.
>>thanks
>>
>>--
>>
>>73
>>Hank WD5JFR
>
> Everyone replies, and yet you get no answers,
>
> R-1131C,D
> Max dcv 150
> ma. 3-25
> peak ma. 55
> starting voltage 225
> crater dia. .093
> candelpower .2@25 ma.
> light color white
>
What is the pin arrangement?

--
---
Richard Knoppow
Los Angeles, CA, USA
dickburk@ix.netcom.com

## 431. Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-23 23:52:45 UTC
From: ferrymanr <richardferryman@btinternet.com>
Message-ID: <A86dnbzxCr7ScHvanZ2dneKdnZydnZ2d@bt.com>
Source record: 5318

I wonder if anyone knows of a really small soldering iron (half the diameter of the Antex 12W iron). I have one I purchased in USA about 20 years ago and the element has now failed. As the manufacturers name has worn off the handle I am at a loss as to where to get a replacement. A search of the web has proved fruitless. It is the only iron I have had that can fit between other components or in very confined spaces when replacing SMD resistors etc.

Original iron:-
Overall length handle and bit 145mm (5 1/2")
Handle diameter 9mm
Shaft (element) diameter 1.6mm
Bit maximum diameter 3mm
Bit tip approximately 0.5mm - may be less.
Supply 12V

Dick G4BBH

## 432. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 01:36:18 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <mADFj.17190$KJ1.9927@newsfe19.lga>
Source record: 5319

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:d5ce3035-b5a1-461e-989c-2076f2c0140d@u10g2000prn.googlegroups.com...
> Looking at how I would configure a 7360-type mixer in the front end of
> a low-band (say 80M and 40M) receiver.
>
> Method A: To me, the most obvious way to do it is to feed the RF into
> the 7360's grid, and feed the deflection plates with balanced local
> oscillator input at circa 10 or 20 V P-P. Put a center-tapped
> transformer to the anodes and pull the output out of a winding.
>
> BUT... that's not what I see being done in the various app notes.
>
> Method B: I see, for example, feeding RF into a single deflection
> plate, and putting a pot for fine-tuning the balance on the other
> plate. LO is injected into the 7360's grid. (e.g. page 6 of
> http://www.ab4oj.com/1st/hb/7360/7360.pdf ). I think the intention
> here is not to saturate the deflector beam inputs into switching mode,
> but to keep the amplitudes small where it'll be linear.
>
> What's the advantages and gotchas of doing it each way? Method A takes
> a lot of LO amplitude and has the highest gain for the RF. Method B
> takes less LO amplitude but I think has lower gain. Method A cancels
> out the LO, and Method B cancels out the original RF. Right?
>
> Of course two 7360's would let me do a doubly-balanced mixer... can't
> afford 7360's but I do have some 6AR8's!
>
> Tim N3QE.

Why not take a peek at the old Sanders articles that ran in the 1960s in
QST? Or, take a lot at the schematics for the Squires-Sanders RX on
BAMA for some real world applications.

Pete

## 433. Re: 45-70MHz crystal filters, MQF,lattice,ladder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 10:37:26 UTC
From: Jean-Daniel HB9AKQ <cianajd@bluewin.ch>
Message-ID: <3e4a6b60-0232-4dea-ad0c-daa733c0dc1e@n58g2000hsf.googlegroups.com>
Source record: 5320

On Mar 23, 5:11 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> "Edward Feustel" <efeus...@hughes.net> wrote in message news: >  > Pete,
> > The Ten Tec Transciever filters are at 9 MHz except in the "general
> > coverage up convert" receivers. in which case they are not narrow at
> > all.
>
> > Note that INRAD offers roofing filters 4-5 KHz wide at VHF frequencies
> > from 40 to 73 MHz ( see page 13 of their catalog ) with i/o impedances
> > of 50 ohms :http://www.inrad.net/inrad.php?mode=catalog
>
> > Ed, N5EI
>
> Thanks Ed,  I haven't kept with this at all.  The INRAD 4 to 5 kHz BW
> roofing filters sound very interesting though.  A lot better than the
> 18-kHz  BW 40.455-MHz monolythics I've played with in the past.
>
> Pete

Hello, to you all who answered this thread lately,
I learned quite a lot, although I knew part of it.

What I can see is that there are roofing filters in the low VHF that
have a narrow bandwidth of about 5kHz. I also learned (was reminded)
that the dissipation power of a crystal could be less than the power
that it could pass. Thanks for the INRAD catatolg, I knew the firm,
I'll go back and have a look at the whole site; it is still my opinion
that it is cheaper to build than buy.

My goal is to have a roofing filter steep enough to be content with
the IQ processing in software and not in hardware, with a 2nd IF in
the dozens of kHz range.

A propos crystal filter, I experienced the SWAN 700CX 16-pole filter -
a dream!! I still have the transceiver in the basement, I would have
to reconstruct the electrolytics I suppose.

I do have the Rhode article on PDF, along with the basic program
adapted to MS-DOS QBASIC, just ask for it, I would send them, as I do
not know how to annex files to the thread.

73 from Jean-Daniel HB9AKQ

## 434. Re: Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 12:57:45 UTC
From: Eric <englere_geo@yahoo.com>
Message-ID: <fc70d465-3500-4891-9fc1-699f06784d1a@e39g2000hsf.googlegroups.com>
Source record: 5321

On Feb 11, 3:45 pm, WA5DXP <nos...@nospam.com> wrote:
> Anyone have the above QST that can possibly scan an article
> E-mail it to me or give me some dimensions from the article?
>
> "Adapting Hy Tower for use on 30 M"

Maybe the company can give you this info? I think the Hy Tower is back
in production now, isn't it?

Eric

## 435. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 14:09:30 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <d6cfcba2-5d50-4c5c-a7df-4e92244f968e@2g2000hsn.googlegroups.com>
Source record: 5322

On Mar 23, 9:36 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> "TimShoppa" <sho...@trailing-edge.com> wrote in message
>
> news:d5ce3035-b5a1-461e-989c-2076f2c0140d@u10g2000prn.googlegroups.com...
>
>
>
>
>
> > Looking at how I would configure a 7360-type mixer in the front end of
> > a low-band (say 80M and 40M) receiver.
>
> > Method A: To me, the most obvious way to do it is to feed the RF into
> > the 7360's grid, and feed the deflection plates with balanced local
> > oscillator input at circa 10 or 20 V P-P. Put a center-tapped
> > transformer to the anodes and pull the output out of a winding.
>
> > BUT... that's not what I see being done in the various app notes.
>
> > Method B: I see, for example, feeding RF into a single deflection
> > plate, and putting a pot for fine-tuning the balance on the other
> > plate. LO is injected into the 7360's grid. (e.g. page 6 of
> >http://www.ab4oj.com/1st/hb/7360/7360.pdf). I think the intention
> > here is not to saturate the deflector beam inputs into switching mode,
> > but to keep the amplitudes small where it'll be linear.
>
> > What's the advantages and gotchas of doing it each way? Method A takes
> > a lot of LO amplitude and has the highest gain for the RF. Method B
> > takes less LO amplitude but I think has lower gain. Method A cancels
> > out the LO, and Method B cancels out the original RF. Right?
>
> > Of course two 7360's would let me do a doubly-balanced mixer... can't
> > afford 7360's but I do have some 6AR8's!
>
> > Tim N3QE.
>
> Why not take a peek at the old Sanders articles that ran in the 1960s in
> QST?  Or, take a lot at the schematics for the Squires-Sanders RX on
> BAMA for some real world applications.

Indeed, the Squires-Sanders receivers show the 7360's being used
exactly like I would use them - feed RF into grid, local oscillator
fed in a balanced way into deflector beam plates, take output from
anodes through a balanced transformer.

But much of the other 50's/60's era notes show deflector beam tubes being used in other mixer configs, e.g. LO on grid and RF into plates. LO on grid might just be a derivation from the self-excited 7360 configs.

What year/month were the Sanders articles in QST? I have most of the late 50's and 60's on my shelves but haven't had a good excuse to look through them lately.

Tim.

## 436. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 15:53:44 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <fs8iq8$7d9$1@theodyn.ncf.ca>
Source record: 5323

Tim Shoppa (shoppa@trailing-edge.com) writes:

> What year/month were the Sanders articles in QST? I have most of the
> late 50's and 60's on my shelves but haven't had a good excuse to look
> through them lately.
>
It's 1963 for the article(s), I seem to recall there was a second article
about the noiseblanker but I'm not sure. The QST review of the receiver
wsa in '64 or maybe '65.

I know the years because I never had QST from 1963 for some reason, though
I have '62 and '64, so I've never actually seen the Squires article.

I can pull a few books off the shelf from the prime hobby use of the 7360,
and when I get around to it, I'll see if there is much variation in the
use of the tube or not.

Of course, for a lot of the articles, there was a point of introduction
and the others followed. So if there is a definite trend in one method,
it might be just as simple as others using what was in the first article.

Michael VE2BVW

# 437. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 17:27:37 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <51505d5b-ef91-4530-9ede-d7e5d2c77a1d@13g2000hsb.googlegroups.com>
Source record: 5324

On Mar 24, 11:53 am, et...@FreeNet.Carleton.CA (Michael Black) wrote:
> TimShoppa(sho...@trailing-edge.com) writes:
> > What year/month were the Sanders articles in QST? I have most of the
> > late 50's and 60's on my shelves but haven't had a good excuse to look
> > through them lately.
>
> It's 1963 for the article(s), I seem to recall there was a second article
> about the noiseblanker but I'm not sure.  The QST review of the receiver
> wsa in '64 or maybe '65.
>
> I know the years because I never had QST from 1963 for some reason, though
> I have '62 and '64, so I've never actually seen the Squires article.
>
> I can pull a few books off the shelf from the prime hobby use of the 7360,
> and when I get around to it, I'll see if there is much variation in the
> use of the tube or not.
>
> Of course, for a lot of the articles, there was a point of introduction
> and the others followed.  So if there is a definite trend in one method,
> it might be just as simple as others using what was in the first article.

The 7360 is prominently featured in the 60's ARRL Handbooks, that's
for sure. There's one exciter that uses three of them!

I do recall a one or two-band receiver in a 60's handbook that uses a
7360 in the front end. In fact, the more I think about that, the more
I realize that this is the receiver I was thinking of building :-).
Gotta go find it!

Tim N3QE

## 438. Re: Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 17:48:19 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <b0f650c5-41e0-4ad1-a314-e3e38c95e33c@e10g2000prf.googlegroups.com>
Source record: 5325

On Mar 23, 4:52 pm, "ferrymanr" <richardferry...@btinternet.com>
wrote:
> I wonder if anyone knows of a really small soldering iron (half the diameter
> of the Antex 12W iron). I have one I purchased in USA about 20 years ago
> and the element has now failed. As the manufacturers name has worn off the
> handle I am at a loss as to where to get a replacement. A search of the web
> has proved fruitless. It is the only iron I have had that can fit between
> other components or in very confined spaces when replacing SMD resistors
> etc.
>
> Original iron:-
> Overall length handle and bit 145mm (5 1/2")
> Handle diameter 9mm
> Shaft (element) diameter 1.6mm
> Bit maximum diameter 3mm
> Bit tip approximately 0.5mm - may be less.
> Supply 12V
>
> Dick G4BBH

A Google search turns up lots of hits on "antex solder".

Paul, KD7HB

## 439. Re: Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 19:41:14 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <47e803f0$0$15174$607ed4bc@cv.net>
Source record: 5326

I cant find your email adr in the posting so I emailed you at your qrz.com address.
I can give you the info you need.

Rick K2XT

## 440. Re: Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 20:54:43 UTC
From: ferrymanr <richardferryman@btinternet.com>
Message-ID: <CIOdnZFA9bGEiHXaRVnyiQA@bt.com>
Source record: 5327

"pdrahn@coinet.com" <co_farmer@yahoo.com> wrote in message
news:b0f650c5-41e0-4ad1-a314-e3e38c95e33c@e10g2000prf.googlegroups.com...
> On Mar 23, 4:52 pm, "ferrymanr" <richardferry...@btinternet.com>
> wrote:
>> I wonder if anyone knows of a really small soldering iron (half the
>> diameter
>> of the Antex 12W iron). I have one I purchased in USA about 20 years ago
>> and the element has now failed. As the manufacturers name has worn off
>> the
>> handle I am at a loss as to where to get a replacement. A search of the
>> web
>> has proved fruitless. It is the only iron I have had that can fit
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>> other components or in very confined spaces when replacing SMD resistors
>> etc.
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>> Original iron:-
>> Overall length handle and bit 145mm (5 1/2")
>> Handle diameter 9mm
>> Shaft (element) diameter 1.6mm
>> Bit maximum diameter 3mm
>> Bit tip approximately 0.5mm - may be less.
>> Supply 12V
>>
>> Dick G4BBH
>
> A Google search turns up lots of hits on "antex solder".
>
> Paul, KD7HB

Problem is the smallest Antex is TOO BIG. My litlle iron is less than 50%
of the size!

Dick

# 441. Re: Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-24 23:48:43 UTC
From: gwhite@alum.mit.edu
Message-ID: <c6qdnflb4o5XsnXanZ2dnUVZ_hGdnZ2d@rcn.net>
Source record: 5328

Keywords:
In article <A86dnbzxCr7ScHvanZ2dneKdnZydnZ2d@bt.com>, "ferrymanr"
<richardferryman@btinternet.com> wrote:
>I wonder if anyone knows of a really small soldering iron (half the diameter
>of the Antex 12W iron). I have one I purchased in USA about 20 years ago
>and the element has now failed. As the manufacturers name has worn off the
>handle I am at a loss as to where to get a replacement. A search of the web
>has proved fruitless. It is the only iron I have had that can fit between
>other components or in very confined spaces when replacing SMD resistors
>etc.
>
>Original iron:-
>Overall length handle and bit 145mm (5 1/2")
>Handle diameter 9mm
>Shaft (element) diameter 1.6mm
>Bit maximum diameter 3mm
>Bit tip approximately 0.5mm - may be less.
>Supply 12V

Can't help you with the mystery iron, but I can tell you a trick I've
used successfully. Take a piece of copper buss wire (~ #22) and wrap it
around the tip of the Antex iron several times with a short bit sticking
out. For small surface mount parts (not connected to a ground plane),
you don't really need much heat. This tip extender trick has allowed me
to solder 0201 surface mount parts in some tight spots. You can file the
point into any shape you like.

Doug White

## 442. Re: Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-25 01:45:36 UTC
From: Al <no.spam@wanted.com>
Message-ID: <4PYFj.1103$N_5.136@trnddc05>
Source record: 5329

On Sun, 23 Mar 2008 23:52:45 +0000, ferrymanr wrote:

> I wonder if anyone knows of a really small soldering iron (half the
> diameter of the Antex 12W iron). I have one I purchased in USA about 20
> years ago and the element has now failed. As the manufacturers name has
> worn off the handle I am at a loss as to where to get a replacement. A
> search of the web has proved fruitless. It is the only iron I have had
> that can fit between other components or in very confined spaces when
> replacing SMD resistors etc.
>
> Original iron:-
> Overall length handle and bit 145mm (5 1/2") Handle diameter 9mm
> Shaft (element) diameter 1.6mm
> Bit maximum diameter 3mm
> Bit tip approximately 0.5mm - may be less. Supply 12V
>
> Dick G4BBH

Is it an ORYX micro-miniture low voltage soldering instrument, Model 6A
that you are looking for?

It's made by W. Greenwood Electronic Limited of Chesham, England.

And I don't think it exists anymore.

Al

## 443. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-25 05:41:14 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0803242222350.13145@darkstar.example.org>
Source record: 5330

On Mon, 24 Mar 2008, Tim Shoppa wrote:

> I do recall a one or two-band receiver in a 60's handbook that uses a
> 7360 in the front end. In fact, the more I think about that, the more
> I realize that this is the receiver I was thinking of building :-).
> Gotta go find it!
>
The timeline may give some clues. I've just dug out some books, which
are easier to get ahold of than my old magazines, but some of this
might be useful.

The earliest references were using the 7360 as a balanced modulator
and product detector.

The CQ SSB Handbook from 1958 has a couple of beam deflection tube
modulators, though they are 6AR8s. Audio to the deflection plates,
and RF to the grid in both instances.

QST for March 1960 has "SSB Circuits Using the 7360 Beam-deflection
Tube", and it's about balanced modulators, again audio to the deflection
plates. A couple of mixers to get up to frequency, and the local
oscillator goes to the cathode or grid, and the IF signal to the
deflection plates.

A December 1960 article shows the 7360 as a product detector, BFO
to the grid and IF to the deflection plates.

Those two QST articles above are in the 1965 ARRL SSB manual, and
all the balanced modulators in the rest of the book show audio to
the deflection plate(s) and oscillator to the grid (or self
excited).

In the August 1961 issue of QST, there's an SSB phasing adaptor
for receivers, again the BFO goes to the grid and the IF to the
deflection plates.

I see no beam deflection tubes mentioned in the 1954 edition of
the ARRL SSB manual, but that's rather expected.

The 1978 edition of "Technical Topics" from the RSGB says the 7360
was introduced in 1960. It has the Squires circuit (but doesn't mention
the month of the QST article), and that puts the IF on the grid
and the oscillator on the deflection plates. And it does use
a balanced circuit on the deflection plates.

QST for May 1965 has the "Miser's Dream" that was a pretty advanced
receiver for the time, including a 7360 mixer and an HF IF filter (though

a second conversion to 455KHz for specific design reasons). I've always considered that the vector for the 7360 in hobby receiver mixers, though if I dug out the article, I'm sure it explicitly referenced the Squires article. One feature of the receiver is a q-multiplier at the signal frequency, to improve front end selectivity given there was no RF amplifier. I've always wondered how necessary that q-multiplier was, given later receivers with high IFs got by fine with limited front end selectivity (I always wondered if the notion of no RF amplifier was so radical that they felt a need for the q-multiplier). For the rest of the decade, various construction articles would use the same basic scheme, a 7360 mixer with a q-multiplier at the signal frequency.

I suspect this is the one you may be thinking of.

That receiver feeds the signal into the grid, and the oscillator goes to the deflection plate (just one), and the blurb (it's not clear if it's Pat Hawker's interpretation or right from the article), that it's simpler but warns it might be slightly more prone to cross-modulation.

A couple of receivers in the 1982 RSGB Handbook have 7360 mixers, and signal to the grid, oscillator to the plates (and one or both of them were balanced).

There was an article by Ray Moore (who I think worked for National) in the February 1973 issue of Ham Radio about designing receivers for strong signal handling, and it covers a lot of mixers, including the 7360. Either he shows a third topology, or he defines the 7360 in terms of a switching mixer. I may find that article, I saw the issue just last week somewhere.

There was a tube receiver in QST about February of 1973 (or was it '72?), that had to be one of the last described there. It went for super strong signal handling, including a 7360 mixer and some sort of power tube as the RF stage.

Michael VE2BVW

## 444. Re: Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-25 05:58:30 UTC
From: No Spam <no@spam.com>
Message-ID: <Kv-dnf_iX7QbCXXanZ2dnUVZ_s_inZ2d@comcast.com>
Source record: 5331

On Tue, 25 Mar 2008 01:45:36 +0000, Al wrote:

> On Sun, 23 Mar 2008 23:52:45 +0000, ferrymanr wrote:
>
>> I wonder if anyone knows of a really small soldering iron (half the
>> diameter of the Antex 12W iron). I have one I purchased in USA about
>> 20 years ago and the element has now failed. As the manufacturers name
>> has worn off the handle I am at a loss as to where to get a
>> replacement. A search of the web has proved fruitless. It is the only
>> iron I have had that can fit between other components or in very
>> confined spaces when replacing SMD resistors etc.
>>
>> Original iron:-
>> Overall length handle and bit 145mm (5 1/2") Handle diameter 9mm Shaft
>> (element) diameter 1.6mm
>> Bit maximum diameter 3mm
>> Bit tip approximately 0.5mm - may be less. Supply 12V
>>
>> Dick G4BBH
>
> Is it an ORYX micro-miniture low voltage soldering instrument, Model 6A
> that you are looking for?
>
> It's made by W. Greenwood Electronic Limited of Chesham, England.
>
> And I don't think it exists anymore.

ARG!!!! That was my favorite iron! I still have it except I can't find
any tips! Whaaa! I want my small iron again! ;-)

## 445. MC1350 - Low noise replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-25 15:13:00 UTC
From: Sbc News <Andy@Hardy.com>
Message-ID: <0E8Gj.36067$J41.26236@newssvr14.news.prodigy.net>
Source record: 5332

Hello,

I'm looking for an IF amp (w/agc and 50db max gain is ample) to use as a replacement for an MC1350. Main reason is noise reduction. Doesn't necessarily need be in 8-pin dip package, however, not enough room for an entirely built-up amp.

Suggestions appreciated.

Thanks,
Emil

## 446. Re: Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-25 15:50:53 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <xb9Gj.38211$TT4.26642@attbi_s22>
Source record: 5333

>> It's made by W. Greenwood Electronic Limited of Chesham, England.
>>
>> And I don't think it exists anymore.
>
> ARG!!!! That was my favorite iron! I still have it except I can't find
> any tips! Whaaa! I want my small iron again! ;-)

You can still buy tips, Google Oryx.

W4ZCB
>
>

## 447. Re: Really tiny soldering iron??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 00:24:18 UTC
From: No Spam <no@spam.com>
Message-ID: <rLydnaYLutsvCnTanZ2dnUVZ_uzinZ2d@comcast.com>
Source record: 5334

On Tue, 25 Mar 2008 15:50:53 +0000, Harold E. Johnson wrote:

> Oryx

I wish you to know.... I've spent hours previously looking for these
tips using google and I could not find anything. But today, using
"Oryx tips", I found exactly what I need! Unreal!

Several packs are now on order!

Thanks Harold!

## 448. Re: MC1350 - Low noise replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 06:15:39 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <4e44faaa-a3d3-4af8-88de-60513233d44e@i7g2000prf.googlegroups.com>
Source record: 5335

On Mar 25, 8:13 am, "Sbc News" <A...@Hardy.com> wrote:
> Hello,
>
> I'm looking for an IF amp (w/agc and 50db max gain is ample) to use as a
> replacement for an MC1350. Main reason is noise reduction. Doesn't
> necessarily need be in 8-pin dip package, however, not enough room for an
> entirely built-up amp.
>
> Suggestions appreciated.
>
> Thanks,
> Emil

You didn't mention what IF frequency...

I believe you'll find some nice VGAs (variable gain amplifiers) at
Analog Devices and probably at Linear Technology. TI is another good
bet. Some are digitally controlled, but I'm pretty sure I've seen
analog-controlled ones too. I've personally been using Linear
Technology's LTC6400-20. It's a fixed 20dB gain part with reasonably
good noise figure and low distortion, useful to a couple hundred MHz.
It's a tad power-hungry (the price you pay for low distortion) and in
a package you may find hard to deal with. But it's been one of the
easiest op amp based amplifiers in this class I've found to keep
stable.

Cheers,
Tom

## 449. FREE HOME BUSINESS NEW OFFER 100%.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 11:16:47 UTC
From: "dreamcashpoint@yahoo.co.in" <dreamcashpoint@yahoo.co.in>
Message-ID: <7aaa2f3d-d948-4628-84c3-ca3e41ba8b28@e6g2000prf.googlegroups.com>
Source record: 5336

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EARNING 1 $ .
100% TRUE 100% PAYMENT .
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# 450. HOME BASED ONLINE FREE BUSINESS

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 11:16:58 UTC
From: "dreamcashpoint@yahoo.co.in" <dreamcashpoint@yahoo.co.in>
Message-ID: <769907b6-5a7d-4915-ad45-39a24c40075a@i29g2000prf.googlegroups.com>
Source record: 5337

FREE MLM BUSINESS .JUST SIGN UP EARN 50 $ AND EACH REFFRAL U WIL
EARNING 1 $ .
100% TRUE 100% PAYMENT .
www.suriyaram.dubaimlm.com

## 451. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 12:36:28 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <92434e63-4eeb-472c-8448-20867ac9f2a4@n75g2000hsh.googlegroups.com>
Source record: 5338

On Mar 25, 1:41 am, Michael Black <et...@ncf.ca> wrote:
> On Mon, 24 Mar 2008, TimShoppawrote:
> > I do recall a one or two-band receiver in a 60'shandbookthat uses a
> > 7360 in the front end. In fact, the more I think about that, the more
> > I realize that this is the receiver I was thinking of building :-).
> > Gotta go find it!
>
> The timeline may give some clues.  I've just dug out some books, which
> are easier to get ahold of than my old magazines, but some of this
> might be useful.
>
> The earliest references were using the 7360 as a balanced modulator
> and product detector.
>
> The CQ SSBHandbookfrom 1958 has a couple of beam deflection tube
> modulators, though they are 6AR8s.  Audio to the deflection plates,
> and RF to the grid in both instances.
>
> QST for March 1960 has "SSB Circuits Using the 7360 Beam-deflection
> Tube", and it's about balanced modulators, again audio to the deflection
> plates.  A couple of mixers to get up to frequency, and the local
> oscillator goes to the cathode or grid, and the IF signal to the
> deflection plates.
>
> A December 1960 article shows the 7360 as a product detector, BFO
> to the grid and IF to the deflection plates.
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> Those two QST articles above are in the 1965 ARRL SSB manual, and
> all the balanced modulators in the rest of the book show audio to
> the deflection plate(s) and oscillator to the grid (or self
> excited).
>
> In the August 1961 issue of QST, there's an SSB phasing adaptor
> for receivers, again the BFO goes to the grid and the IF to the
> deflection plates.
>
> I see no beam deflection tubes mentioned in the 1954 edition of
> the ARRL SSB manual, but that's rather expected.
>
> The 1978 edition of "Technical Topics" from the RSGB says the 7360
> was introduced in 1960.  It has the Squires circuit (but doesn't mention
> the month of the QST article), and that puts the IF on the grid
> and the oscillator on the deflection plates.  And it does use
> a balanced circuit on the deflection plates.

> QST for May 1965 has the "Miser's Dream" that was a pretty advanced
> receiver for the time, including a 7360 mixer and an HF IF filter (though
> a second conversion to 455KHz for specific design reasons). I've
> always considered that the vector for the 7360 in hobby receiver
> mixers, though if I dug out the article, I'm sure it explicitly
> referenced the Squires article. One feature of the receiver is
> a q-multiplier at the signal frequency, to improve front end
> selectivity given there was no RF amplifier. I've always wondered
> how necessary that q-multiplier was, given later receivers with
> high IFs got by fine with limited front end selectivity (I always
> wondered if the notion of no RF amplifier was so radical that
> they felt a need for the q-multiplier). For the rest of the
> decade, various construction articles would use the same basic
> scheme, a 7360 mixer with a q-multiplier at the signal frequency.
>
> I suspect this is the one you may be thinking of.
>
> That receiver feeds the signal into the grid, and the oscillator
> goes to the deflection plate (just one), and the blurb (it's
> not clear if it's Pat Hawker's interpretation or right from
> the article), that it's simpler but warns it might be slightly
> more prone to cross-modulation.
>
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> and signal to the grid, oscillator to the plates (and one or both
> of them were balanced).
>
> There was an article by Ray Moore (who I think worked for National)
> in the February 1973 issue of Ham Radio about designing receivers
> for strong signal handling, and it covers a lot of mixers, including
> the 7360. Either he shows a third topology, or he defines the
> 7360 in terms of a switching mixer. I may find that article, I
> saw the issue just last week somewhere.
>
> There was a tube receiver in QST about February of 1973 (or was
> it '72?), that had to be one of the last described there. It went
> for super strong signal handling, including a 7360 mixer and some
> sort of power tube as the RF stage.
>
>  Michael VE2BVW

Wow, Michael, that's an incredible survey of the literature! I now
have in front of me the 65 Handbook and the Miser's Dream is indeed
what I was thinking about building. If, for no other reason, than
because they put the oscillator on the deflector plates and the RF to
the grid!

The 7360 tutorials in the 65 SSB book show everything but RF to the
grid and oscillator to deflector plate :-). I think in part because
they thought of it as a product detector, not a front end mixer.

Interesting that the first mention you find is the 6AR8. I always thought the 7360 came first - but maybe the 6AR8 was more available. At least one of the rigs in the 65 SSB book uses a 6AR8 too.

Tim.

# 452. Re: MC1350 - Low noise replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 13:49:14 UTC
From: Sbc News <Andy@Hardy.com>
Message-ID: <uvsGj.329$Nc5.183@newssvr27.news.prodigy.net>
Source record: 5339

Tom,
Thanks for the help. I'll check out your suggestions. The IF freq in my application is ~5mhz.
Emil

"K7ITM" <k7itm@msn.com> wrote in message news:4e44faaa-a3d3-4af8-88de-60513233d44e@i7g2000prf.googlegroups.com...
> On Mar 25, 8:13 am, "Sbc News" <A...@Hardy.com> wrote:
>> Hello,
>>
>> I'm looking for an IF amp (w/agc and 50db max gain is ample) to use as a
>> replacement for an MC1350. Main reason is noise reduction. Doesn't
>> necessarily need be in 8-pin dip package, however, not enough room for an
>> entirely built-up amp.
>>
>> Suggestions appreciated.
>>
>> Thanks,
>> Emil
>
> You didn't mention what IF frequency...
>
> I believe you'll find some nice VGAs (variable gain amplifiers) at
> Analog Devices and probably at Linear Technology. TI is another good
> bet. Some are digitally controlled, but I'm pretty sure I've seen
> analog-controlled ones too. I've personally been using Linear
> Technology's LTC6400-20. It's a fixed 20dB gain part with reasonably
> good noise figure and low distortion, useful to a couple hundred MHz.
> It's a tad power-hungry (the price you pay for low distortion) and in
> a package you may find hard to deal with. But it's been one of the
> easiest op amp based amplifiers in this class I've found to keep
> stable.
>
> Cheers,
> Tom

## 453. Re: Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 16:38:22 UTC
From: Jim <nospam@nospam.com>
Message-ID: <5ruku3hfo49a73js7de04jkdvictu7rruf@4ax.com>
Source record: 5340

Someone mailed the information, and yes, I found that
the information is available from Hy Gain (now MFJ).
It was article on how to use HY-Tower on 30 M. Well,
I just make a remote tuning network for it that allows it
to work ALL the HF bands from 160 to 10m, controlled
from the operating position, works great.

Thanks to everyone for their help.

On Mon, 24 Mar 2008 15:41:14 -0400, "Rick" <ricknj10@hotmail.com>
wrote:

>I cant find your email adr in the posting so I emailed you at your qrz.com
>address.
>I can give you the info you need.
>
>Rick K2XT
>

# 454. Re: HP Function Generators: (2) HP 3310A (1) HP 3311A

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 22:12:04 UTC
From: CP <someone@nospam.com>
Message-ID: <z4qdnU-hvI-mV3fanZ2dnUVZ_sGvnZ2d@comcast.com>
Source record: 5341
Cross-posted to:
rec.radio.swap,sci.electronics.repair,sci.electronics.equipment,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Your links don't work.

"Al Schapira" <a.d.schapira@worldnet.att.net> wrote in message
news:43910B3C.4000905@worldnet.att.net...
> The following equipment is offered for sale. Each is used, but
> in working condition, with a complete *original* operating and
> service manual and power cord. Shipping to a US address is
> *included*.
>
> Thanks for looking.
>
> -Al Schapira, KC2HRH, a.d.schapira@worldnet.att.net
> ==========
>
> HP 3310A Function Generator #1 (S/N #1151A08983)
> Sine/square/triangle/ramp/pulse 0.0005 Hz to 5 Mhz, and external
> VCO input. Working perfectly. Minor nicks and scrapes on the top
> of the case from being stacked. About 7 lbs. $75.00.
> See
> http://home.att.net/~a.schapira/pix/HP/HP-3310A_1.jpg
> http://home.att.net/~a.schapira/pix/HP/HP-3310A_manual.jpg
>
> HP 3310A Function Generator #2 (S/N # 1151A08978)
> Sine/square/triangle/ramp/pulse 0.0005 Hz to 5 Mhz, and external
> VCO input. Working perfectly. Minor nicks and scrapes on the top
> of the case from being stacked. Pilot lamp assembly has been
> replaced with round red led. About 7 lbs. $65.00.
> See
> http://home.att.net/~a.schapira/pix/HP/HP-3310A_2.jpg
> http://home.att.net/~a.schapira/pix/HP/HP-3310A_manual.jpg
>
> HP 3311A Function Generator (S/N #1244A29453)
> Sine/square/triangle to 0.1 Hz to 1 Mhz, and external VCO input.
> Working perfectly. About 4 lbs, $75.00.
> See
> http://home.att.net/~a.schapira/pix/HP/HP-3311A.jpg
> http://home.att.net/~a.schapira/pix/HP/HP-3311A_manual.jpg

## 455. Re: HP Function Generators: (2) HP 3310A (1) HP 3311A

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-26 22:22:30 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <13ulj5576787lc2@corp.supernews.com>
Source record: 5342
Cross-posted to:
rec.radio.swap,sci.electronics.repair,sci.electronics.equipment,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

CP wrote:
>
> Your links don't work.

You are replying to spam that is over two years old.

--
aioe.org is home to cowards and terrorists

Add this line to your news proxy nfilter.dat file
* drop Path:*aioe.org!not-for-mail to drop all aioe.org traffic.

http://improve-usenet.org/index.html

## 456. Re: MC1350 - Low noise replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-27 09:14:15 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.03.27.09.14.15.885694@localhost.localdomain>
Source record: 5343

On Wed, 26 Mar 2008 13:49:14 +0000, Sbc News wrote:

> The IF freq in my application is ~5mhz.

<snip>

Hi,

5MHz? There's opamps that can do 50dB at that frequency. Just another
option for you :-)

Cheers,

--
Gregg

## 457. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-28 02:46:43 UTC
From: hexter@blazenet.net
Message-ID: <47ec5c12$0$17438$470ef3ce@news.pa.net>
Source record: 5344
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

In article <13udqvdloks0v68@corp.supernews.com>, dickburk@ix.netcom.com says...
>
>
>"gudmundur" <hexter@blazenet.net> wrote in message
>news:47e47a97$0$11007$470ef3ce@news.pa.net...
>> In article
>> <f%XCj.32304$J41.13043@newssvr14.news.prodigy.net>,
>> kolesnik@nojunksbcglobal.net says...
>>>
>>>I got a couple of the subject tubes which are supposed to
>>>be "glow
>>>modulator tubes". Best I can determine is that the light
>>>output will
>>>vary with current but I can't find data sheet googling.
>>>If anyone has
>>>pinout and/or data I'd sure like to see it. I think it
>>>might be a mid
>>>1960s item as my 1957 Sylvania manual doesn't show it.
>>>thanks
>>>
>>>--
>>>
>>>73
>>>Hank WD5JFR
>>
>> Everyone replies, and yet you get no answers,
>>
>> R-1131C,D
>> Max dcv 150
>> ma. 3-25
>> peak ma. 55
>> starting voltage 225
>> crater dia. .093
>> candelpower .2@25 ma.
>> light color white
>>
> What is the pin arrangement?
>

This Sylvania industrial tube catalog has ratings only, and
sadly no pinouts. It does say the light beam can be modulated
up to 1 mhz. Pretty good bandwidth for old technology.

>
>--
>---
>Richard Knoppow
>Los Angeles, CA, USA
>dickburk@ix.netcom.com
>
>

## 458. Re: Need Article from July 1986 QST P 45

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-28 22:40:53 UTC
From: George Csahanin <george@dyb.com>
Message-ID: <VteHj.16869$5K1.3868@newssvr12.news.prodigy.net>
Source record: 5345

Its on BAMA

-G
"WA5DXP" <nospam@nospam.com> wrote in message
news:dk81r35j0230klugrkldde6m1idc557ogs@4ax.com...
> Anyone have the above QST that can possibly scan an article
> E-mail it to me or give me some dimensions from the article?
>
> "Adapting Hy Tower for use on 30 M"
>
>
> Thanks,
>
> Jim, WA5DXP
> wa5dxp@gmail.com
>
>
>
>
>

## 459. Open form coils for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-29 11:24:30 UTC
From: Henry <wa0goz@arrl.net>
Message-ID: <nsCdnRnBbuL1unPanZ2dnUVZ_tqtnZ2d@comcast.com>
Source record: 5346

I have the following new open form coils for sale.

Air Dux coils

(3) 408T 1/2" dia X 2" long 8t/in $4 each
(4) 416T 1/2" dia X 2" long 15t/in $4 each
(3) 432T 1/2" dia X 2" long 30t/in $4 each
(4) 804T 1" dia X 3" long 4t/in $5 each
(3) 810T 1" dia X 3" long 10t/in $5 each
(3) 816T 1" dia X 3" long 16t/in $5 each

B & W coils

(1) 3006 5/8" dia X 1 1/4" long 8t/in $3
(1) 3008 5/8" dia X 1 7/8" long 32t/in $4

B & W xmitting coils each with a coupling loop on a 5 pin ceramic base
(You have to be old to remember these. :-) )

(1) 10JEL (used) $8
(1) 40JEL $9
(1) 80JEL $10

Unknown manufacturer coils (but made like Air Dux)

(4) 1 1/4" dia X 10" long 6t/in $18 each
(2) 1 1/4" dia X 10" long 10t/in $18 each
(1) 2" dia X 10" long 4t/in $18
(1) 2" dia X 7/8" long 10t/in $2

Prices are plus shipping in CONUS. I need your zip code to figure
shipping.

Henry WA0GOZ
wa0goz@arrl.net

# 460. ** FLEA at MIT ** Sunday April 20th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-30 06:19:01 UTC
From: w1gsl@mit.edu
Message-ID: <47ef30d5$0$300$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 5347
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.info

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

<FF>
********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday April 20th 2008
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held on Albany between Mass Ave and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

SEASON PASS + Advance Seller Discount

A sellers discount season pass is available which
offers a 30% discount. By prepaying you get a
discount and earlier admission. See the registration form.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776 (M-F 9-5)

********** $1 buyers discount with hard copy of this notice ************

<FF>

Mail the coupon below by the 5th of the April to be a Prepaid Vendor.

FLEA at MIT 2008 Rates

SELLERS

To use your prepaid spaces the named vendor MUST be present.
Rates include one admission per space.

Season Pass Sellers admission to all seven meets this year
$99 First Space
$70 Each Additional space
Must be received by April 20th.

Advance $17 First space
$12 Additional Spaces
Must be received by the 10th of the month.

Gate Admission $20 First Space
$15 Additional Spaces
Admission is after the prepaid vendors.

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

cut and return
**************************************************************************
FLEA at MIT 2008 Advance Space Application 4/08

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional
____Season Pass @ $99 ____ Additional Season Spaces @ $70 ___EBB @$70

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

**********
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
**********

## 461. Re: USB Multimeter for Temp ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-30 10:39:45 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <e4fa3fcf-fac8-4dda-9c4c-ca766a88b3c5@i12g2000prf.googlegroups.com>
Source record: 5348

On Mar 19, 2:14 am, "xpyttl" <xpyttl_NOS...@earthling.net> wrote:
> "msg" <msg@_cybertheque.org_> wrote in message
>
> news:13tr1ti35rp7p60@corp.supernews.com...
>
> > nesesu wrote:
>
> > <snip>
> > Wow this is promiscuously cross-posted...
>
> Thanks for pointing that out. I was about to say that this is
> rec.radio.amateur.homebrew so why not build something. But apparently, it's
> just buckshot
>
> ..

hey, loosen up - the thread has been a good tutorial of whats
available, where to get it, applications, and a nice link to a
homebrew heating project. (Which, BTW, was published in a local
magazine notorious for NOT publishing anything that needed more than a
hammer to assemble...) What more do you want? - how to carve them
yourself out of a block of germanium?

Andrew VK3BFA.

## 462. Re: Sylvania R1131C octal tube ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-30 15:19:56 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <wcOHj.30808$R84.6989@newssvr25.news.prodigy.net>
Source record: 5349
Cross-posted to: rec.radio.amateur.boatanchors,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.design

Thanks for all the help..
I also found this on an old schematic where they show a 1 meg resistor
across the 3 & 7.
pin 3 cathode
pin 7 anode

--

73
Hank WD5JFR

"Richard Knoppow" <dickburk@ix.netcom.com> wrote in message
news:13udr26kehk9g7a@corp.supernews.com...
>
> "gudmundur" <hexter@blazenet.net> wrote in message
> news:47e47a97$0$11007$470ef3ce@news.pa.net...
>> In article <f%XCj.32304$J41.13043@newssvr14.news.prodigy.net>,
>> kolesnik@nojunksbcglobal.net says...
>>>
>>>I got a couple of the subject tubes which are supposed to be "glow
>>>modulator tubes". Best I can determine is that the light output will
>>>vary with current but I can't find data sheet googling. If anyone
>>>has
>>>pinout and/or data I'd sure like to see it. I think it might be a
>>>mid
>>>1960s item as my 1957 Sylvania manual doesn't show it.
>>>thanks
>>>
>>>--
>>>
>>>73
>>>Hank WD5JFR
>>
>> Everyone replies, and yet you get no answers,
>>
>> R-1131C,D
>> Max dcv 150
>> ma. 3-25
>> peak ma. 55
>> starting voltage 225
>> crater dia. .093
>> candelpower .2@25 ma.
>> light color white
>>

> What is the pin arrangement?
>
>
> --
> ---
> Richard Knoppow
> Los Angeles, CA, USA
> dickburk@ix.netcom.com
>
>

## 463. Sheet-beam tubes (6ar8, 7360, etc) as analog multipliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-31 20:05:45 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <78ednUcEOqONq2zanZ2dnUVZ_qygnZ2d@cpinternet>
Source record: 5350
Cross-posted to: comp.arch.embedded,rec.radio.amateur.homebrew

Posted to two newsgroups known to be read by likely respondents ;)

The published literature on pre-solid-state electronic analog multipliers is scant except for production equipment from analog computer makers (which by now is difficult to locate). One example of a useful technique is a four quadrant electron beam multiplier described here:

http://dspace.mit.edu/bitstream/1721.1/4819/1/RLE-TR-249-04734375.pdf

More exotic tubes with curved deflection geometries followed, however obtaining such tubes is now difficult.

Has anyone at some point tried using sheet-beam deflection tubes as were used in synchronous detectors and balanced modulator designs for analog multiplication? I imagine that using four tubes each driven by quadrant-limited amplifiers and whose outputs would be biased and summed with scaling may work within a few percent of input values based on a quick look at the characteristic curves published for these tubes. Another option would be to add a magnetic deflection yoke over the tubes to provide a proportional steering of the beam sheet in conjunction with the electro-static deflection (one of the deflection circuits could be placed in the negative feedback loop of an op-amp) to reduce the number of tubes required to two (+/-x, y; +/-x, -y).

It wouldn't take long to breadboard a test circuit for investigation, but knowing past efforts is always welcome. Surely someone has evaluated using these tubes in this fashion, even if just for kicks ;)

Michael

## 464. Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-31 21:11:22 UTC
From: Esther & Fester Bestertester <not@me.really>
Message-ID: <0001HW.C416A18A02E8435FB01AD9AF@news.sf.sbcglobal.net>
Source record: 5351
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'd like to build a variable inductor with what I have around my shop (lots of bits n' pieces, but no cores). I need it to work in the area of 20-30 mH, 1A, 25-30 KHz.

Is this something do-able? Is there something available off-the-shelf?

Suggestions of how to go about it would be greatly appreciated.

FBt

## 465. IF Tuning Cans Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-31 21:34:48 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <uNclj.16001$%15.7861@bignews7.bellsouth.net>
Source record: 5352

I have a receiver with some ferrite tuning coils in the IF. In the process of retuning, attempting to peak the IF, I cracked coils in two cans and they are locked into place. They are in same position from original and the receiver seems fine, makes sensitivity etc. Is there any measurable change to the inductor Q or other parameter when this occurs? I did get replacements but the effort to replace seems difficult.
--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 466. Re: Sheet-beam tubes (6ar8, 7360, etc) as analog multipliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-03-31 22:56:09 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <temdnfte8emU8WzanZ2dnUVZ_hninZ2d@web-ster.com>
Source record: 5353
Cross-posted to: comp.arch.embedded,rec.radio.amateur.homebrew

On Mon, 31 Mar 2008 14:05:45 -0600, msg wrote:

> Posted to two newsgroups known to be read by likely respondents ;)
>
> The published literature on pre-solid-state electronic analog
> multipliers is scant except for production equipment from analog
> computer makers (which by now is difficult to locate). One example of a
> useful technique is a four quadrant electron beam multiplier described
> here:
>
> http://dspace.mit.edu/bitstream/1721.1/4819/1/RLE-TR-249-04734375.pdf
>
> More exotic tubes with curved deflection geometries followed, however
> obtaining such tubes is now difficult.
>
> Has anyone at some point tried using sheet-beam deflection tubes as were
> used in synchronous detectors and balanced modulator designs for analog
> multiplication? I imagine that using four tubes each driven by
> quadrant-limited amplifiers and whose outputs would be biased and summed
> with scaling may work within a few percent of input values based on a
> quick look at the characteristic curves published for these tubes.
> Another option would be to add a magnetic deflection yoke over the tubes
> to provide a proportional steering of the beam sheet in conjunction with
> the electro- static deflection (one of the deflection circuits could be
> placed in the negative feedback loop of an op-amp) to reduce the number
> of tubes required to two (+/-x, y; +/-x, -y).
>
> It wouldn't take long to breadboard a test circuit for investigation,
> but knowing past efforts is always welcome. Surely someone has evaluated
> using these tubes in this fashion, even if just for kicks ;)
>
> Michael

Two thoughts:

1: x(1 + y) - x(1 - y) = 2xy. Two beam tubes and a couple of op-amps, and you're in business. Even with tube op-amps you may use less space and have less grief from offsets than the space of your quadrant-switching amp and whatever grief you get from same.

2: There are any number of hot-rod DSP chips that'll fit into a T6-1/2 envelope, complete with ADC's, DAC's and a power supply to run off of 6.3VAC. Sealing the glass up without messing up the DSP may be a challenge, but you could always fudge and use acrylic.

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

Need to learn how to apply control theory in your embedded system?
"Applied Control Theory for Embedded Systems" by Tim Wescott
Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

## 467. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-01 08:07:46 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.04.01.08.07.42.513291@localhost.localdomain>
Source record: 5354
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Mon, 31 Mar 2008 14:11:22 -0700, Esther & Fester Bestertester wrote:

> I'd like to build a variable inductor with what I have around my shop (lots
> of bits n' pieces, but no cores). I need it to work in the area of 20-30 mH,
> 1A, 25-30 KHz.
>
> Is this something do-able? Is there something available off-the-shelf?
>
> Suggestions of how to go about it would be greatly appreciated.
>
> FBt

Hi,

You need it to handle 1A of current down there? You must be a VLFer.

No cores is right, it will probably saturate and make for a BBQ. We are
talking a BIG air core inductor here. A variometer might be your best bet
for variable inductance with those specs. Give that a Google.

Cheers,

--
Gregg

## 468. Re: Sheet-beam tubes (6ar8, 7360, etc) as analog multipliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-01 13:42:32 UTC
From: Tauno Voipio <tauno.voipio@INVALIDiki.fi>
Message-ID: <cZqIj.183$Qx5.54@read4.inet.fi>
Source record: 5355
Cross-posted to: comp.arch.embedded,rec.radio.amateur.homebrew

msg wrote:
> Posted to two newsgroups known to be read by likely respondents ;)
>
> The published literature on pre-solid-state electronic analog
> multipliers is scant except for production equipment from
> analog computer makers (which by now is difficult to locate).
> One example of a useful technique is a four quadrant electron
> beam multiplier described here:
>
> http://dspace.mit.edu/bitstream/1721.1/4819/1/RLE-TR-249-04734375.pdf
>
> More exotic tubes with curved deflection geometries followed,
> however obtaining such tubes is now difficult.
>
> Has anyone at some point tried using sheet-beam deflection
> tubes as were used in synchronous detectors and balanced
> modulator designs for analog multiplication? I imagine
> that using four tubes each driven by quadrant-limited
> amplifiers and whose outputs would be biased and summed
> with scaling may work within a few percent of input values
> based on a quick look at the characteristic curves published
> for these tubes. Another option would be to add a magnetic
> deflection yoke over the tubes to provide a proportional
> steering of the beam sheet in conjunction with the electro-
> static deflection (one of the deflection circuits could be
> placed in the negative feedback loop of an op-amp) to
> reduce the number of tubes required to two (+/-x, y; +/-x, -y).
>
> It wouldn't take long to breadboard a test circuit for
> investigation, but knowing past efforts is always welcome.
> Surely someone has evaluated using these tubes in this fashion,
> even if just for kicks ;)
>
> Michael

Just a memory from tens of years ago:

The 7360 made a decent balanced modulator, but it is,
by definition, extremely sensitive for external electric
and magnetic fields.

--

Tauno Voipio (OH2UG)
tauno voipio (at) iki fi

## 469. Re: Sheet-beam tubes (6ar8, 7360, etc) as analog multipliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-01 19:35:26 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <voCdnbaCSey0HW_anZ2dnUVZ_sWdnZ2d@cpinternet>
Source record: 5356
Cross-posted to: comp.arch.embedded,rec.radio.amateur.homebrew

Tim Wescott wrote:

<snip>
> 2: There are any number of hot-rod DSP chips that'll fit into a T6-1/2
> envelope, complete with ADC's, DAC's and a power supply to run off of
> 6.3VAC. Sealing the glass up without messing up the DSP may be a
> challenge, but you could always fudge and use acrylic.
>

This would be a new acme in solid-state (Fetron-style) replacements ;)

Michael

## 470. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-01 19:49:15 UTC
From: Esther & Fester Bestertester <not@me.really>
Message-ID: <0001HW.C417DFCB0308199DB01AD9AF@news.sf.sbcglobal.net>
Source record: 5357

> A variometer might be your best bet
> for variable inductance with those specs. Give that a Google.

Thanks for the pointer, Gregg. Excellent information available, once one knows the right terminology. :-)

FBt

## 471. Need socket pinout on 4CX1500B Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 00:48:25 UTC
From: Jim <nospam@nospam.com>
Message-ID: <t3a8v3hgs868udvushbdo9vf0qbhn44fle@4ax.com>
Source record: 5358

Can anyone lead me to a diagram of the pinout for this tube? I found one for PENTA but it was so distorted could not make it out.

I think the center pin/bottom ring must be one side of the filament and possibly the cathode.

Any leads appreciated. I even have the socket but cannot figure the pinout.

Thanks

# 472. Re: Need socket pinout on 4CX1500B Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 01:04:04 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <82WIj.50073$TT4.26217@attbi_s22>
Source record: 5359

"Jim" <nospam@nospam.com> wrote in message
news:t3a8v3hgs868udvushbdo9vf0qbhn44fle@4ax.com...
> Can anyone lead me to a diagram of the pinout for this tube? I found
> one for PENTA but it was so distorted could not make it out.
>
> I think the center pin/bottom ring must be one side of the filament
> and possibly the cathode.
>
> Any leads appreciated. I even have the socket but cannot figure
> the pinout.
>
> Thanks
>
>
Bottom Heater
Next up Heater and cathode
Next up Grid
Next up Screen

W4ZCB

## 473. Inductors in nH

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 04:42:55 UTC
From: kalpraj.m@gmail.com
Message-ID: <72548d31-4558-4d7e-ad8c-e3e2ad0ac53f@e10g2000prf.googlegroups.com>
Source record: 5360

Hi all,
I am student of engineering. I require inductors in nH range. But
m not able to find it out. Please tell me any site or place so that i
can get that in one or two days. Or if u hav any methode of makin
inductors please tell me.

## 474. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 06:00:33 UTC
From: Anon bozo <anon@bozo.to>
Message-ID: <0001HW.C419C0910348DBCCB01AD9AF@news.sf.sbcglobal.net>
Source record: 5361

> You need it to handle 1A of current down there? You must be a VLFer.
>
> No cores is right, it will probably saturate and make for a BBQ. We are
> talking a BIG air core inductor here.

OK, how about if I lower the specs to ~0.5A, or even less. How can I construct a variable inductor 0 to 10 mHy (or more)?

Thank,
FBt

## 475. Re: Inductors in nH

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 06:52:03 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <0ad015e3-f5ba-4e28-ba07-34f61cf5f7b0@r9g2000prd.googlegroups.com>
Source record: 5362

On Apr 2, 9:42 pm, kalpra...@gmail.com wrote:
> Hi all,
> I am student of engineering. I require inductors in nH range. But
> m not able to find it out. Please tell me any site or place so that i
> can get that in one or two days. Or if u hav any methode of makin
> inductors please tell me.

It is not difficult to wind your own inductors. Values up to at least a few hundred nanohenries may be made by winding copper wire around the threads of a machine screw, and unscrewing the screw, leaving a self-supporting coil. You have to be reasonably careful with such a coil, but it's a practical way to wind small coils. For higher values that require wire that's too fine to be self-supporting that way, you can wind the coil on a ceramic or plastic form. PVC pipe isn't the best RF insulator, but even it makes a decent coil form, and it's very cheap and readily available in various sizes. You can find small polystryene tubing at hobby stores, and it works well for a coil form, too. The type they sell isn't high quality RF grade stock, but again, it generally works well for coil forms. You can probably find other plastic cylinders around your school that will work as coil forms. You can even make your own by rolling up paper.

A good web site for calculating the inductance of a cylindrical helix is http://hamwaves.com/antennas/inductance.html. There's an inductance calculator for cylindrical helix coils and toroid coils in the RFSim99 package which you should be able to find for free download. It may well be useful to you for other things, too.

I assume these coils are for use at RF frequencies, probably a few MHz or above, so winding them with solid wire is appropriate. Air-core coils will have the best Q if you wind them with a little space between the turns--pitch of the turns about 1.5 to 2 times the wire diameter is usually good.

In the US, you can order inductors from DigiKey or Mouser and get them quickly if you live close to where they are shipped from, or if you pay extra for fast delivery.

Cheers,
Tom

## 476. Re: Inductors in nH

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 11:12:19 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <duadnW87N8fiJmna4p2dnAA@pipex.net>
Source record: 5363

K7ITM wrote:

> A good web site for calculating the inductance of a cylindrical helix
> is http://hamwaves.com/antennas/inductance.html. There's an
> inductance calculator for cylindrical helix coils and toroid coils in
> the RFSim99 package which you should be able to find for free
> download. It may well be useful to you for other things, too.
==========
Tnx Tom for the above 'excellent' comprehensive web site reference.

Frank GM0CSZ / KN6WH

## 477. For sale: Johnson Ranger....

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 13:35:56 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0804030930380.19782@panix3.panix.com>
Source record: 5364
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.swap,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

For sale: Viking Johnson Ranger

I bought it at a hamfest a number of years ago ('03?) when I was phasing into retirement and thinking of doing some kind of a restoration and had partial success with this. However, I have gravitated to a different kind of retirement ham hobby activity: total or almost total homebrewing. Thus, I'd like to find a new home for this Ranger.

Caveats: It has some major internal problems, The guy before the guy I bought it from had totally torn out all of the CW circuitry. Also, the modulator was converted from 2x1614s to a pair of 2E26s. The modulation transformer is unknown, hermetically sealed (black pot), and of a brand name I've never heard of, and larger than the original, AND located on the opposite side of the chassis. This guy also converted the speech amplifier to a big mess and a phase inverter driver for the 2E26s. Also, as part of this job, he tore out the 5V4 (?) and left the 5R4 thus making it all 500-550 vdc and no low voltage. To get low voltage (for VFO and 6CL6s) he used power resistors in series with low voltage load and connected the top to the high voltage supply. He also moved the VR tube to where the crystal socket was. The power transformer and large choke seem like the original.

At the time I aquired the rig, the electrolytic was dry (hum on carrier looke like 30% on a scope). I made a kludge repair on that and drove the 2E26s with an outboard hi-fi amp and actually had the rig on the air in several AM contacts on 160 and 75. The VFO does not jump frequency (I had this problem on an earlier Ranger many years ago) during or after warm-up, at least to the extent that I monitored this. I have observed a spur coming sometimes from the 6146 driver (in standby, swishing through the driver tune knob, get a herterodyne in a receiver).

My own mods included two mini-toggle switches near the function switch (which needs cleaning and oil). The meter is OK, but the meter switch needs cleaning, too. I added a DPDT relay run off the 110 vac as part of a plan to change the manner of control of standby to transmit and back. Off the back panel I've added banana jacks for certain outside "port" connections, and one of those European-type female chassis plugs (three prong) that you see everywhere now for AC-in. I also tore out the power line filter (caps to ground & series inductances [I've gotten mild shocks off all of this old gear that put those things in under the 'old ways' GMPs, but I think they are basically useless]). The cabinet cosmetics are probably, IIRC, closest to "very good" in terms of few scratches/wear and barely any rust or corrosion anywhere (except some on some surfaces of the transformers/chokes).

There may be some other minor issues but I can't think of them just now.

So, you could look at this as a restoration to a less-than-original state or a spare-parts source. I paid $200 for this, but I paid too much. I guess its worth $50, now, and I think I don't want to ship it. I'm in southern Delaware and not in a hurry to get rid of it but would like to free up some space in my hamshack and get it into someone's hands who is wants to do the restoration I was going for (just AM capability), or whatever. So, I'm willing to drive one way about up to one hour in any direction to some "half-way" point away from my home. Manual reproduction comes with. There is also a Georgetown, DE hamfest on April 12, here (at Sussex Tech HS), and could meet someone there, too.

If you are interested then email me and tell me your story (in case there is more than one person interested who can meet me within my one hour driving radius of Georgetown, DE). Respond to the email address originating from this post, but if I don't answer within 2 days, make a followup post and give your email address in that post (I have spam filters but simple email usually does get through).

W4PON

# 478. Re: Need socket pinout on 4CX1500B Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 14:10:04 UTC
From: Jim <nospam@nospam.com>
Message-ID: <u8p9v3tl4he9msecg4b3j6b51a3vfm9ive@4ax.com>
Source record: 5365

Thanks for the pinout.

Jim

On Thu, 03 Apr 2008 01:04:04 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>
>"Jim" <nospam@nospam.com> wrote in message
>news:t3a8v3hgs868udvushbdo9vf0qbhn44fle@4ax.com...
>> Can anyone lead me to a diagram of the pinout for this tube? I found
>> one for PENTA but it was so distorted could not make it out.
>>
>> I think the center pin/bottom ring must be one side of the filament
>> and possibly the cathode.
>>
>> Any leads appreciated. I even have the socket but cannot figure
>> the pinout.
>>
>> Thanks
>>
>>
>Bottom Heater
>Next up Heater and cathode
>Next up Grid
>Next up Screen
>
>W4ZCB
>

## 479. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 15:50:15 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfv9v5n.2u7t.bit-bucket@shell.config.com>
Source record: 5366

On Wed, 2 Apr 2008 23:00:33 -0700, Anon bozo wrote:
>> You need it to handle 1A of current down there? You must be a VLFer.
>>
>> No cores is right, it will probably saturate and make for a BBQ. We are
>> talking a BIG air core inductor here.
>
> OK, how about if I lower the specs to ~0.5A, or even less. How can I
> construct a variable inductor 0 to 10 mHy (or more)?

Maybe a variac? Or, would that be too VVLF? HI!HI!

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

## 480. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 15:57:08 UTC
From: JB <ml43@verizon.net>
Message-ID: <o77Jj.18730$bC6.7879@trnddc08>
Source record: 5367
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.misc

This is the answer:
http://www.qsl.net/in3otd/variodes.html

"Esther & Fester Bestertester" <not@me.really> wrote in message
news:0001HW.C416A18A02E8435FB01AD9AF@news.sf.sbcglobal.net...
> I'd like to build a variable inductor with what I have around my shop
(lots
> of bits n' pieces, but no cores). I need it to work in the area of 20-30
mH,
> 1A, 25-30 KHz.
>
> Is this something do-able? Is there something available off-the-shelf?
>
> Suggestions of how to go about it would be greatly appreciated.
>
> FBt
>

## 481. Re: Inductors in nH

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 16:40:23 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <134bc9c1-260d-49ac-af7a-9d8739c91994@u10g2000prn.googlegroups.com>
Source record: 5368

kalpraj.m@gmail.com wrote on Wed, Apr 2 2008 9:42 pm:

>Hi all,
> I am student of engineering. I require inductors in nH range. But
>m not able to find it out. Please tell me any site or place so that i
>can get that in one or two days. Or if u hav any methode of makin
>inductors please tell me.

Try Ham Radio Magazine for July 1977 and the article "Self-Supporting Coils" by Leonard H. Anderson.

I will send a PDF copy to you by private e-mail as an attachment.

Please note that WIRE LEADS to coils in the nanoHenry range will have appreciable inductance by themselves and will affect any inductance calculations you do.

73, Len AF6AY

## 482. Re: Need socket pinout on 4CX1500B Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-03 19:00:44 UTC
From: Skipp says hello <spamtheotherguy@yahoo.com>
Message-ID: <ft39gs$l0d$1@skeeter.ucdavis.edu>
Source record: 5369

Same socket and tube connection as the 4cx1000

There's a data sheet on the http://www.radiowrench.com/sonic

cheers,
s.

: Jim <nospam@nospam.com> wrote:
: Can anyone lead me to a diagram of the pinout for this tube? I found
: one for PENTA but it was so distorted could not make it out.

: I think the center pin/bottom ring must be one side of the filament
: and possibly the cathode.

: Any leads appreciated. I even have the socket but cannot figure
: the pinout.

: Thanks

## 483. Re: HP Function Generators: (2) HP 3310A (1) HP 3311A

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-04 03:31:48 UTC
From: Al Schapira <a.schapira@worldnet.att.net>
Message-ID: <47F59FE9.8030507@worldnet.att.net>
Source record: 5370
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Michael A. Terrell wrote:
> CP wrote:
>> Your links don't work.
>
> You are replying to spam that is over two years old.
>

I removed the pictures when the units were sold (as you said, over two years ago) but it wasn't spam. -Al

## 484. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-04 14:48:56 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfvcfuo.2fbc.bit-bucket@shell.config.com>
Source record: 5371
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 03 Apr 2008 15:57:08 GMT, JB wrote:
> This is the answer:
> http://www.qsl.net/in3otd/variodes.html

I like the way the answers are carried out to *thirteen* decimal places!

## 485. 814 Tube like with triode ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-04 16:32:41 UTC
From: Heriberto <lu6dbu@cybertap.com.ar>
Message-ID: <ft5l4o$1j1$1@aioe.org>
Source record: 5372

Hi:

Somebody knows the conditions of work of pentodo 814 like triode with
grid grounded ?
Thanks in advance

Heriberto
LU6DBU

# 486. Re: Need socket pinout on 4CX1500B Tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-04 20:22:48 UTC
From: Jim <nospam@nospam.com>
Message-ID: <if3dv396d4osddrotgqr0u1fpopdvnf6c4@4ax.com>
Source record: 5373

Skip;

Good site, got the articles and data sheets, gonna read the article on
building the 4cx1000 Amp for ideas...

On Thu, 3 Apr 2008 19:00:44 +0000 (UTC), Skipp says hello
<spamtheotherguy@yahoo.com> wrote:

>Same socket and tube connection as the 4cx1000
>
>There's a data sheet on the http://www.radiowrench.com/sonic
>
>cheers,
>s.
>
>: Jim <nospam@nospam.com> wrote:
>: Can anyone lead me to a diagram of the pinout for this tube? I found
>: one for PENTA but it was so distorted could not make it out.
>
>: I think the center pin/bottom ring must be one side of the filament
>: and possibly the cathode.
>
>: Any leads appreciated. I even have the socket but cannot figure
>: the pinout.
>
>: Thanks
>

# 487. Re: IF Tuning Cans Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-05 17:22:31 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <a24dd29f-9556-4a9e-b766-dc48640cc2ef@s37g2000prg.googlegroups.com>
Source record: 5374

On Mar 31, 2:34 pm, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
> I have a receiver with some ferrite tuning coils in the IF. In the
> process of retuning, attempting to peak the IF, I cracked coils in two
> cans and they are locked into place. They are in same position from
> original and the receiver seems fine, makes sensitivity etc. Is there
> any measurable change to the inductor Q or other parameter when this
> occurs? I did get replacements but the effort to replace seems difficult.

There is PROBABLY no difference.

Assuming the usual "455 KHz" IFT, the cores are most probably
POWDERED IRON in a binder, not "ferrite." Ferrite is iron powder
alloy that
is sintered (heated to not quite liquid state) and thus holds itself
together
without any polymer (plastic) binder.

Ferrite cores and structures will produce different results if broken
than the
manufacturer's data but cannot be predicted. In general, powdered
iron
cores already have their powder "broken" by suspension in the binder
and
can be glued/cemented together without undue change.

Ferrite things have been used in the microwave region for about 50
years
and, for uniformity/reproducibility, require the things to be unbroken
to achieve
the desired results. But, that is in the region of 1 GHz and above
and doesn't
apply to the typical IFT.

73, Len AF6AY

# 488. Re: IF Tuning Cans Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-05 22:13:36 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <47F7F990.7060902@NETTALLY.COM>
Source record: 5375

AF6AY wrote:
> On Mar 31, 2:34 pm, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
>> I have a receiver with some ferrite tuning coils in the IF. In the
>> process of retuning, attempting to peak the IF, I cracked coils in two
>> cans and they are locked into place. They are in same position from
>> original and the receiver seems fine, makes sensitivity etc. Is there
>> any measurable change to the inductor Q or other parameter when this
>> occurs? I did get replacements but the effort to replace seems difficult.
>
> There is PROBABLY no difference.
>
> Assuming the usual "455 KHz" IFT, the cores are most probably
> POWDERED IRON in a binder, not "ferrite." Ferrite is iron powder
> alloy that
> is sintered (heated to not quite liquid state) and thus holds itself
> together
> without any polymer (plastic) binder.
>
> Ferrite cores and structures will produce different results if broken
> than the
> manufacturer's data but cannot be predicted. In general, powdered
> iron
> cores already have their powder "broken" by suspension in the binder
> and
> can be glued/cemented together without undue change.
>
> Ferrite things have been used in the microwave region for about 50
> years
> and, for uniformity/reproducibility, require the things to be unbroken
> to achieve
> the desired results. But, that is in the region of 1 GHz and above
> and doesn't
> apply to the typical IFT.
>
> 73, Len AF6AY

Thanks for the info!

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"©

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 489. Dissimilar transistors in VHF 55W PA made to work by DC radio pirate

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-06 03:02:45 UTC
From: WSQT <wsqtradio@ziplip.com>
Message-ID: <4833bf6a-65b8-4379-8395-28ead8ba15f2@d45g2000hsc.googlegroups.com>
Source record: 5376

I thought some hams would appreciate the fruits of this research by WSQT Guerrilla Radio in DC. We have managed to make a 55W power amp for 88MHZ from a random pair of RF transistors, one a VHF device and one a UHF device! The amp works clean and stable despite its unconventional design, forced by components available to dumpster-diving pirates with little funds. Although broadcast amps are single-frequency, the matching networks used in VHF transistor amps are so low-Q that communications amps can often span their bandwidth with only a little further development, treating the matching networks as filters for purposes of design.

The results of this research should be relevant to Amateur FM mode operation in 2 meters(and 6 too for that matter if anyone is so inclined), as well as to the FM broadcast pirate work this particular amp was made for. Never done a linear(not used in FM nor AM broadcast in these power ranges), so have no idea if it would work or if one side would clip first and generate splatter! This is a 55W amp, but if you are sitting on two medium size or big VHF or UHF transistors that don't match, consider trying them together!

The amp works like this: Each half is just an ordinary VHF power amp with one transistor, with the junctions of the input and output L networks ties together in parallel. Each L-network matches to twice the usual value at the junction point, as there are two in parallel. The output matching/loading capacitor and lowpass filter are in common, as is a pi network to allow a 600 ohm input impedance for each side(to keep coils realistic). Nothing else too it, except that stabilizing it works quite differently than any of those matched-transistor parallel designs that are referenced elsewhere and provided background for this project.

The key to the whole design is this: You CANNOT stabilize a dissimilar parallel amp with the usual low-value resistors running base-base and collector to collector. That was tried first-and the collector side one ran red hot! Strange, as the amp sounded clean with no big spurs, though it loaded awful heavy. Removing that resistor brought the expected storm of hash, while using 500 ohms instead of 10 collector-collector brought near stability, but not quite. At that point I was able to load and tune the amp close to correctly, but power was short of expectations and stability was marginal. Then I tried removing the base-base resistor-Presto! Far less, even after removing the collector resistor too! Each amp needed to be damped separately for low frequencies just as though it was running alone, and that was the end of all the hash. At that point, the amp could finally be loaded to full power.

Here's the rest of the stabilizing tricks, used on each side: 5 ohm resistors to ground from each base(10 ohms base-base center tapped results, not 2ohms floating), connect the base RFC's to a pad with a 150PF cap to ground and a 15 ohm resistor paralleled by a bead choke instead. On the collector side, each RFC simply needs the same 150PF cap from its pad, and a bead choke shunted by a 10 ohm resistor to another pad with a .047 capacitor and a single 100uf electrolytic for the pair, and you've got stability!

Except for the full on pi network matching the input to the base networks, it is otherwise just a dissimilar pair of 25-30W amplifiers, but they work,and a Pentium 4 heatsink and fan is enough to keep things cool. Expect the PA to draw about 6A at 12 volts, and expect to use a 5W driver to run it.

As for why the collector resistors ran so hot with the amp running clean, here's what I suspect: Since the two devices are so dissimilar, the current has different rise and fall times on each side. This amounts to different even-harmonic amplitudes and phases on each side- which amounts to a push-pull harmonic current superimposed on the common-mode, even in the absence of oscillation! This isn't coupled out, but appears across any stabilizing resistor used collector to collector. With single-ended transistor amps, the lowpass filter does most of the work on stopping harmonics anyway, and in the absence of oscillation or a parametric (addition) situation, no new frequencies not in either amps separate output appear. Only relative phases and amplitudes of harmonics need differ side-side to create a push-pull current.

Anyway, the amp works, dummy load testing sounded clean, and on-air testing gave no nasty suprises and no overheating with a Pentium 4 heatsink and fan.

## 490. Cable repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-07 04:58:39 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <47f9a9ff$0$1095$4c368faf@roadrunner.com>
Source record: 5377

I had a backlog of a couple dozen patch cables to repair. Usually ony one end is damaged so I use the capacitance function on my multimeter to measure the wire to wire capacitance from each end of the wire. When I find a wire that reads near 0 capcitance compared to the others I know which wire it is and which end it is on.. I was surprised none of my co-workers were aware of this trick as a lot of them have near 30 years of experience an are no dummies so I thought I would pass this along.

Jimmie

## 491. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1207548301@panix.com>
Source record: 5378
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

## 492. Re: Cable repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-08 08:08:11 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.04.08.08.08.11.2086@localhost.localdomain>
Source record: 5379

Thanks for the tip!

I used a TDR in the shop. This is MUCH easier.

Cheers!

# 493. Re: Cable repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-08 18:08:30 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <3e8ab734-7c72-46bf-89c3-730c4175f571@n1g2000prb.googlegroups.com>
Source record: 5380

On Apr 6, 9:58 pm, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> I had a backlog of a couple dozen patch cables to repair. Usually ony one
> end is damaged so I use the capacitance function on my multimeter to measure
> the wire to wire capacitance from each end of the wire. When I find a wire
> that reads near 0 capcitance compared to the others I know which wire it is
> and which end it is on.. I was surprised none of my co-workers were aware of
> this trick as a lot of them have near 30 years of experience an are no
> dummies so I thought I would pass this along.
>
> Jimmie

I hate to say this, but if you want to measure continuity of a wire or a coax center conductor, you use the OHMS function. [sigh...]

The capacitance function on coax or shielded wire is good for determining (approximately) where a break might have occurred. That is an old trick that's been around for at least 40 years, such as at Rocketdyne's old Santa Susanna Field Test area where hundreds of cables were used for rocket engine tests.

73, Len AF6AY

## 494. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-08 19:18:48 UTC
From: Wim Ton <wton@bluewin.ch>
Message-ID: <47fbc3d3$1_7@news.bluewin.ch>
Source record: 5381
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Esther & Fester Bestertester" <not@me.really> wrote in message
news:0001HW.C416A18A02E8435FB01AD9AF@news.sf.sbcglobal.net...
> I'd like to build a variable inductor with what I have around my shop
(lots
> of bits n' pieces, but no cores). I need it to work in the area of 20-30
mH,
> 1A, 25-30 KHz.

How about using a very low-ohmic wire-wound pot? OK. Q will not be
brilliant, but in these applications you may get away with it

Wim

## 495. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-08 19:37:43 UTC
From: Sjouke Burry <burrynulnulfour@ppllaanneett.nnlll>
Message-ID: <47fbc987$0$7187$ba620dc5@text.nova.planet.nl>
Source record: 5382
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Esther & Fester Bestertester wrote:
> I'd like to build a variable inductor with what I have around my shop (lots
> of bits n' pieces, but no cores). I need it to work in the area of 20-30 mH,
> 1A, 25-30 KHz.
>
> Is this something do-able? Is there something available off-the-shelf?
>
> Suggestions of how to go about it would be greatly appreciated.
>
> FBt
>
Take a transformer with sufficient mH, and use a constant current
on one of the unused windings to saturate the iron core to reduce
the mH rating.

## 496. Re: Cable repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-08 20:00:00 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <79QKj.5023$3N1.3739@newsfe17.lga>
Source record: 5383

"Jimmie D" <GFENDER@carolina.rr.com> wrote in message
news:47f9a9ff$0$1095$4c368faf@roadrunner.com...
>I had a backlog of a couple dozen patch cables to repair. Usually ony one
>end is damaged so I use the capacitance function on my multimeter to
>measure the wire to wire capacitance from each end of the wire. >
>
> Jimmie

Good suggestion.

>

## 497. 100 watt Kenwood PA vs homebrewing

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-09 21:23:56 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <47fd340c$0$15195$607ed4bc@cv.net>
Source record: 5384

If you are thinking of a brick for your QRP rig how's this for an idea? Instead of homebrewing one up why not get one that is already assembled and working? A lot less work. I am parting out a Kenwood TS120 that is not easily repairable because of a broken bandswitch. I broke the bandswitch while cleaning it and have decided to just part out the rig. You can have the PA section complete for $60.

Rick
k2xt@arrl.net

## 498. Kenwood VFO vs homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-09 21:26:17 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <47fd3499$0$15202$607ed4bc@cv.net>
Source record: 5385

I know this is a homebrew newsgroup so how's this idea? For your next homebrew rig how'd you like to have a nice stable, calibrated VFO to drop into it? Right out of a Kenwood TS-120 that is being parted out. $40 and it's yours.

Rick
k2xt@arrl.net

## 499. Re: 100 watt Kenwood PA vs homebrewing

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-09 21:52:59 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <U6qdnfmVlrAEp2Da4p2dnAA@pipex.net>
Source record: 5386

Rick wrote:
> If you are thinking of a brick for your QRP rig how's this for an idea?
> Instead of homebrewing one up why not get one that is already assembled and
> working? A lot less work. I am parting out a Kenwood TS120 that is not
> easily repairable because of a broken bandswitch. I broke the bandswitch
> while cleaning it and have decided to just part out the rig. You can have
> the PA section complete for $60.
>
> Rick
> k2xt@arrl.net
==========
Rick , why not offering a non-working Kenwood TS120 for $100.- or less ?

Frank GM0CSZ/KN6WH

# 500. FA: TAYLOR, BUD, JOHNSON + 32V-3 PART

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-10 00:55:59 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <zAdLj.84529$D_3.46328@bgtnsc05-news.ops.worldnet.att.net>
Source record: 5387

JUST LISTED: ANTIQUE BUD, JOHNSON, AND TAYLOR TUBE CATALOGS + COLLINS 32V-3 AC POWER COVER; see at:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

MO COMING SOON: heytubeguy

# 501. Re: Kenwood VFO vs homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-10 15:44:01 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0804101141580.15675@darkstar.example.org>
Source record: 5388

On Wed, 9 Apr 2008, Rick wrote:

> I know this is a homebrew newsgroup so how's this idea? For your next
> homebrew rig how'd you like to have a nice stable, calibrated VFO to drop
> into it? Right out of a Kenwood TS-120 that is being parted out. $40 and
> it's yours.
>
WHat you've missed is that this isn't a forsale newsgroup.

You've not come here to discuss an idea, you've come to try to sell
something.

ANd you can't even do it properly, instead you try to sneak it in
as if you are starting discussion.

Not once, but twice.

Take your junk elsewhere.

Unless you actually want to discuss using commercial modules
in otherwise home made equipment, in which case you should have
started with that instead of your ads.

Michael VE2BVW

## 502. Re: Kenwood VFO vs homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-10 16:03:51 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <47fe3afa$0$15203$607ed4bc@cv.net>
Source record: 5389

> Take your junk elsewhere.
You are absolutely correct.
If I had a way to cancel my posting I would.
My deepest apologies to you and the group.

Rick

## 503. Re: Kenwood VFO vs homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-10 17:09:15 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <nLWdnUc8n7v9pmPanZ2dnUVZ_vXinZ2d@cpinternet>
Source record: 5390

Michael Black wrote:

<snip>
> Take your junk elsewhere.
>
> Unless you actually want to discuss using commercial modules
> in otherwise home made equipment, in which case you should have
> started with that instead of your ads.

How do you feel about the repetitive FA and FS posts from
'Heytubeguy'? No one ever comments about them...

Michael

# 504. Re: Kenwood VFO vs homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-10 17:28:31 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <47fe4e5f$0$15162$607ed4bc@cv.net>
Source record: 5391

.
>
> How do you feel about the repetitive [snip]
> Michael

Michael, let's keep it to discussions about homebrew, ok? I gave in, I apologised to you.
Let's not let this fine newsgroup degenerate into a pissing and moaning forum. You made
your point already.

Rick K2XT

## 505. Re: Kenwood VFO vs homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-10 18:47:40 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <f66dnRoDDYXtz2PanZ2dnUVZ_qvinZ2d@cpinternet>
Source record: 5392

Rick wrote:

> .
>
>>How do you feel about the repetitive [snip]
>>Michael
>
>
> Michael, let's keep it to discussions about homebrew, ok? I gave in, I
> apologised to you.
> Let's not let this fine newsgroup degenerate into a pissing and moaning
> forum. You made
> your point already.
>
> Rick K2XT
>
>

Please check the headers; I am not the respondent to your last post. I
was addressing _my_ post to Michael Black.

Regards,

Michael G.

## 506. Re: Kenwood VFO vs homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-10 22:36:32 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnfvt5jg.26e4.bit-bucket@shell.config.com>
Source record: 5393

On Thu, 10 Apr 2008 12:09:15 -0500, msg wrote:
> Michael Black wrote:
>
><snip>
>> Take your junk elsewhere.
>>
>> Unless you actually want to discuss using commercial modules
>> in otherwise home made equipment, in which case you should have
>> started with that instead of your ads.
>
> How do you feel about the repetitive FA and FS posts from
> 'Heytubeguy'? No one ever comments about them...

I probably would, except my KILLFILE is taking care of _those_ quite
nicely. I never see'em.

# 507. Availability of headset mic with RJ45 plug and 3.5mm plug for a Kenwood?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-11 13:46:28 UTC
From: fazamy <fazamy@aol.com>
Message-ID: <40487228-6044-41ef-b690-382bd6afe971@8g2000hse.googlegroups.com>
Source record: 5394

For easier ssb contesting, I want to be able to use a headset mic. My headset mic has 2 mini stereo plugs one for a mic input and the other for speaker output. My rig has a RJ45 jack on the front panel for a mic input and a 3.5mm jack for audio outpput.
Is there a commercially available adapter cable that will allow me to use my headset mic? --An adapter cable that can permit a 3.5mm to RJ45 mic input. Or is there a headset mic that has a RJ45 plug and a 35mm plug?

Thanks.

KB2AMY

# 508. Re: Availability of headset mic with RJ45 plug and 3.5mm plug for a Kenwood?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-11 21:56:51 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <J5WdnT_ESNjlQ2LanZ2dnUVZ8tmhnZ2d@pipex.net>
Source record: 5395

fazamy wrote:
> For easier ssb contesting, I want to be able to use a headset mic. My
> headset mic has 2 mini stereo plugs one for a mic input and the other
> for speaker output. My rig has a RJ45 jack on the front panel for a
> mic input and a 3.5mm jack for audio outpput.
> Is there a commercially available adapter cable that will allow me to
> use my headset mic? --An adapter cable that can permit a 3.5mm to RJ45
> mic input. Or is there a headset mic that has a RJ45 plug and a 35mm
> plug?
==========
RJ45 plug (8 fingers)is the same as the one used for ethernet
connections. So get a short ethernet cable with 2 fitted RJ45
connectors ,cut-off 1 RJ45 connector + a piece of cable ,leaving a short
piece of cable and a RJ45 connector.
and fit on 2 of the 8 wires a mini stereo socket.
Your transceiver manual/circuit diagramme should show which 2 of the 8
wires are to be connected to the microphone . You should also be able to
find the 2 wires for PTT.

Just today I was shown a Yaesu transceiver with a microphone having a
RJ45 connector for the microphone ,PTT and freq up & down push buttons.
An ethernet cable plug fitted nicely in the transceiver's socket.

Frank GM0CSZ / KN6WH

## 509. Re: Inductors in nH

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-12 00:44:05 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <5e7b8f54-ae2a-4fb1-b7d9-964c10144f28@y21g2000hsf.googlegroups.com>
Source record: 5396

On Apr 3, 9:12 am, Highland Ham <abcgm0csz.kn6wh...@dsl.pipex.com>
wrote:
> K7ITM wrote:
> > A good web site for calculating the inductance of a cylindrical helix
> > ishttp://hamwaves.com/antennas/inductance.html.  There's an
> > inductance calculator for cylindrical helix coils and toroid coils in
> > the RFSim99 package which you should be able to find for free
> > download.  It may well be useful to you for other things, too.
>
> ======================
> Tnx Tom for the above 'excellent' comprehensive web site reference.
>
> Frank  GM0CSZ / KN6WH

Toilet paper cores; kitchen paper towel cores etc.
Wooden dowel rods.
Even cardboard boxes or a plastic bottle or container.

## 510. Re: Sheet-beam tubes (6ar8, 7360, etc) as analog multipliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-12 18:28:08 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4800ff37$0$25925$4c368faf@roadrunner.com>
Source record: 5397
Cross-posted to: comp.arch.embedded,rec.radio.amateur.homebrew

> Just a memory from tens of years ago:
>
> The 7360 made a decent balanced modulator, but it is,
> by definition, extremely sensitive for external electric
> and magnetic fields.
>
> --
>
> Tauno Voipio (OH2UG)
> tauno voipio (at) iki fi

You just answered a problem thats had been nagging me for over 30 years.
Now I know why the SSB transmitter I built had such an annoying hum in it.

I never thought about it being affected by a magnetic field.

Jimmie

## 511. Re: Sheet-beam tubes (6ar8, 7360, etc) as analog multipliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-12 19:35:13 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <TvCdnS5biI9Wk5zVnZ2dnUVZ8s-qnZ2d@pipex.net>
Source record: 5398
Cross-posted to: comp.arch.embedded,rec.radio.amateur.homebrew

Jimmie D wrote:
>> Just a memory from tens of years ago:
>>
>> The 7360 made a decent balanced modulator, but it is,
>> by definition, extremely sensitive for external electric
>> and magnetic fields.
>>
>> --
>>
>> Tauno Voipio (OH2UG)
>> tauno voipio (at) iki fi
>
> You just answered a problem thats had been nagging me for over 30 years.
> Now I know why the SSB transmitter I built had such an annoying hum in it.
>
> I never thought about it being affected by a magnetic field.
==========
For that reason in 1970s transceivers like Yaesu FT-400/401 the 7360
used as balanced modulator was 'packed' in a tight metal screen bonded
to chassis.

Frank GM0CSZ / KN6WH

## 512. Vaccum tube made in FIVRE

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-13 09:31:47 UTC
From: Vintage <radiovintage2000@yahoo.it>
Message-ID: <8115454e-4236-4657-817d-cb5adde7a22b@y21g2000hsf.googlegroups.com>
Source record: 5399

Hallo Members

I search of information and characteristics of the F30 tube made in
FIVRE .
Thank to All Frank

e-mail : radiovintage2000@yahoo.it

# 513. cheap wholesale prada shoes gucci shoes lacoste shoes dunk shoes puma shoes air force one shoes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-13 13:59:35 UTC
From: ebayshoe@yahoo.cn
Message-ID: <41a58248-a837-4b53-93cd-dbbbf6db2af7@b9g2000prh.googlegroups.com>
Source record: 5400

Welcome to visit www.china-sneakers.com
We Wholesale Cheap Jordan Shoes, Michael Jordan Shoes, Nike Jordan Basketball shoes, ... Jordan Shoes, Air Jordan Sneakers, Air Jordan Wholesale All of the Air Jordan sneakers have Nike Air in the shoes. Authentic quality Jordan Sneakers Custom Jordan Sneakers Wholesale Jordan Sneakers gucci sneakers prada sneakers,lv chanel coach dior DG DSQUARED2 DIESEL,miumiu handbags sneakers,t-shirts,jeans,jackets.We sale new Nike Sneakers,Air Jordan Sneakers,AIR FORCE 1S,Nike Dunks SB,
Bape Sta from nike outlets and factory stores, also Nike wholesale - Jordan Shoes. Nike Shoes, sport Shoes, Reebok Shoes,Basketball Shoes,prada,bapestar,Nike Shox,Dunks,Nike Flightposite ,Nike jordan Basketball ,K1X Chiefglider wholesale suppliers factory.We sale new Nike Sneakers,Air Jordan Sneakers,AIR FORCE 1S,Nike Dunks SB, Bape Sta
from nike Wholesale china nike jordans gucci prada sneakers at cheap price !!!

cheap gucci,prada dsquared2 sneakers wholesale

lacoste outlet
Max 90 Sneakers
wholesale Nike Air Max 91 Supplier
wholesale Nike Air Max 95 Shoes Supplier
wholesale Nike Air Max 97 Trainers
wholesale Nike Air Max 2003 Wholesale
wholesale Nike Air Max 2004 Shoes Wholesale
wholesale Nike Air Max 2005 Shop
wholesale Nike Air Max 2006 Shoes Shop
wholesale Nike Air Max 360 Catalogs
wholesale Nike Air Max Ltd Shoes Catalogs
wholesale Nike Air Max Tn Men's Shoes
wholesale Nike Air Max Tn 2 Women's Shoes
wholesale Nike Air Max Tn 3 Customize
wholesale Nike Air Max Tn 4 Shoes Customize
wholesale Nike Air Max Tn 6 Supply
wholesale Nike Shox NZ Shoes Supply
wholesale Nike Shox OZ Sale
wholesale Nike Shox TL Store
wholesale Nike Shox TL 2 Shoes Store
wholesale Nike Shox TL 3 Distributor
wholesale Nike Shox Bmw Shoes Distributor
wholesale Nike Shox Elite Shoes Manufacturer

wholesale Nike Shox Monster Manufacturer
wholesale Nike Shox R4 Running Shoes
wholesale Nike Shox R5 Mens Shoes
wholesale Nike Shox Ride Womens Shoes
wholesale Nike Shox Rival Shoes Wholesaler
wholesale Nike Shox Energia Wholesaler
wholesale Nike Shox LV Sneaker
wholesale Nike Shox Turbo Suppliers
wholesale Nike Shox Classic Shoes Suppliers
wholesale Nike Shox Dendara Trainer
wholesale Nike Air Jordan 1 Seller
wholesale Nike Air Jordan 2 Shoes Seller
wholesale Nike Air Jordan 3 Collection
wholesale Nike Air Jordan 4 Shoes Collection
wholesale Nike Air Jordan 5 Chaussure Shoes
wholesale Nike Air Jordan 6 Catalog
wholesale Nike Air Jordan 7 Shoes Catalog
wholesale Nike Air Jordan 8 Customized
wholesale Nike Air Jordan 9 Shoes Customized
wholesale Nike Air Jordan 10 Wholesalers
wholesale Nike Jordan 11 Shoes Wholesalers
wholesale Nike Air Jordan 12 Factory
wholesale Nike Air Jordan 13 Shoes Factory
wholesale Nike Air Jordan 14 Shoes Sell
wholesale Nike Air Jordan 16 Exporter
wholesale Nike Air Jordan 17 Shoes Exporter
wholesale Nike Air Jordan 18 Offer
wholesale Nike Air Jordan 19 Shoes Offer
wholesale Nike Air Jordan 20 Manufacture
wholesale Nike Jordan 21 Shoes Manufacture
wholesale Nike Air Force 1 Low Directory
wholesale Air Force 1 High Shoes Directory
wholesale Nike Air Force 1 Custom Importer
wholesale Air Force 1 Dollar Shoes Importer
wholesale Nike Air Force 1 Clear Sales
wholesale Air Force 1 Carving Shoes Sales
wholesale Timberland Boots High Offers
wholesale Timberland Boots Low Sell
wholesale Timberland Boots Mid Shoes Buyer
wholesale Timberland Boots Womens Buyer
wholesale Adidas Good Year Buy
wholesale Adidas Running Shoes Buy
wholesale Adidas Football Shoes Selection
wholesale Adidas Basketball Shoes Discount
wholesale Adidas 35 Years 35th Anniversary
wholesale Adidas T MAC 3.5 4.5 5 6
wholesale Adidas 35 Years 35th Anniversary
Jordans Wholesale
Cheap Jordans Wholesale
Jordans Retro Wholesale

Air Jordans Wholesale
Nike Shoes Wholesale China
Discount Jordans Price Wholesale
Wholesale Nike Distributor
Wholesale Nike Sneaker
Wholesale Nike Air Force 1
Air Clear Force One Wholesale
Nike Air Force Wholesale
Buy Jordans Wholesale
Wholesale Nike Tennis Shoes
Jordans Retro Wholesale
Wholesale Kid Jordans
Wholesale Nike Dunk
Authentic Jordans Wholesale
Nike Shoes Wholesale China
Wholesale Custom Jordans
Air China Jordans Wholesale
Jordans Retro Wholesale
Nike Air Jordan Wholesale
Nike Golf Wholesale
Wholesale Jordans
Wholesale Nike Shox
Wholesale Basketball Shoes Nike
Air Jordans Price Wholesale
Jordans Kid Wholesale
Wholesale Air Force One And Jordans
Jordans Shoes Wholesale
Wholesale Air Jordans
Air Jordans At Wholesale Price
Wholesale Nike Tennis Shoes
Wholesale NIKE Sneakers from our Nike factory to Nike shop & Nike store,sale and Wholesale all of Nike stock Shoes,we have many type of NIKE Sneakers :Nike discount Shoes,Nike cheap Shoes,Nike stock Shoes (Nike Trainers, Nike Sneakers,Nike Running Shoes,Nike Basketball Shoes,Nike Discount Shoes,Nike Cheap Shoes,footwear, Sports Shoes )Nike Shoes Wholesale sizes include:Nike men's Shoes,Nike women's Shoes,Nike mens Shoes,Nike womens Shoes, Nike men Shoes,Nike women Shoes,Nike kids Shoes, Nike child Shoes.Nike discount Shoes,Nike in www.china-sneakers.com
cheap Shoes,china Nike Shoes,Nike Shoes Wholesale,Jordan SHOES,Air Force one 1s,Nike Shox,Nike shoe Air max wholesale price.china wholesale sneakers Nike celebrates 25 birthday of Air Force Ones BUY SELL NIKE SHOX JORDAN MAX TIMBERLAND AIR FORCE PRADA TN PUMA.
in www.china-sneakers.com

## 514. Re: Sheet-beam tubes (6ar8, 7360, etc) as analog multipliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-13 15:06:23 UTC
From: Tauno Voipio <tauno.voipio@INVALIDiki.fi>
Message-ID: <PjpMj.183$mN4.122@read4.inet.fi>
Source record: 5251
Cross-posted to: comp.arch.embedded,rec.radio.amateur.homebrew

Jimmie D wrote:
>>Just a memory from tens of years ago:
>>
>>The 7360 made a decent balanced modulator, but it is,
>>by definition, extremely sensitive for external electric
>>and magnetic fields.
>>
>>--
>>
>>Tauno Voipio (OH2UG)
>>tauno voipio (at) iki fi
>
>
> You just answered a problem thats had been nagging me for over 30 years.
> Now I know why the SSB transmitter I built had such an annoying hum in it.
>
> I never thought about it being affected by a magnetic field.
>
> Jimmie
>
>

Think about a magnetically-deflected TV picture tube.

I noticed the problem, when my Eico 753 (around 1968) worked
fine when the power supply was on the right side, but had
a rough hum reported by other stations, if the power supply
box was moved to the other flank.

--

Tauno Voipio (OH2UG)

## 515. FA:PRE-MOVING SALE:PARTS & RADIOS...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-13 18:38:18 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <uqsMj.183210$cQ1.22903@bgtnsc04-news.ops.worldnet.att.net>
Source record: 5252

Have started to list many parts and some of my personal antique radios
(see Facebook: at
www.facebook.com/album.php?aid=2000463&l=c8e18&id=1110063202 ) for sale
before
moving orders come through:---IE: Atwater Kent #35 on Monday--

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

Tnx for looking, Heytubeguy

## 516. PA3AKE - High Performance Front-End Update

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-13 20:52:36 UTC
From: "Gian, I7SWX" <i7swx@yahoo.com>
Message-ID: <c0deb349-963b-41ec-a7ab-2c4a92244848@b1g2000hsg.googlegroups.com>
Source record: 5253

Hi all,

for those of you interested on high performance analog front-end I
have the pleasure to inform that Martein, PA3AKE, has just updated his
website.

Please look at the following:
o Front-end Board
„X H-Mode Mixer
„X Roofing Filters
„X SSB
„X CW

in particular the release of the front-end board with additional 500Hz
CW roofing filter. This update is complete with schematics, part list,
PCB artwork and last but not least extensive performance
measurements.

http://www.xs4all.nl/~martein/pa3ake/hmode/index.html

Enjoy the visit and reading

73

Gian
I7SWX

## 517. Re: Cable repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-14 01:06:41 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4802ae20$0$9509$4c368faf@roadrunner.com>
Source record: 5254

"AF6AY" <LenAnderson@ieee.org> wrote in message
news:3e8ab734-7c72-46bf-89c3-730c4175f571@n1g2000prb.googlegroups.com...
On Apr 6, 9:58?pm, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
> I had a backlog of a couple dozen patch cables to repair. Usually ony one
> end is damaged so I use the capacitance function on my multimeter to
> measure
> the wire to wire capacitance from each end of the wire. When I find a wire
> that reads near 0 capcitance compared to the others I know which wire it
> is
> and which end it is on.. I was surprised none of my co-workers were aware
> of
> this trick as a lot of them have near 30 years of experience an are no
> dummies so I thought I would pass this along.
>
> Jimmie

I hate to say this, but if you want to measure continuity of a wire or
a coax center conductor, you use the OHMS function. [sigh...]

The ohmmeter function doesnt tell you which end is bad.
I use this on LAN jumpers mike cords, foot switches,coax connectors, cannon
plugs...
where the cable is known to be open but the question is now just which end.
Gee I thought I was clear on this. [sigh...]

Jimmie

## 518. Re: Variable inductor, DIY?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-14 15:31:44 UTC
From: JB <ml43@verizon.net>
Message-ID: <ANKMj.12270$tw3.4972@trnddc03>
Source record: 5255
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I never measured a Variac before. Might be higher than you were looking
for. That's variable for sure. A good thing to have around the shop.

"JB" <ml43@verizon.net> wrote in message
news:o77Jj.18730$bC6.7879@trnddc08...
> This is the answer:
> http://www.qsl.net/in3otd/variodes.html
>
>
> "Esther & Fester Bestertester" <not@me.really> wrote in message
> news:0001HW.C416A18A02E8435FB01AD9AF@news.sf.sbcglobal.net...
> > I'd like to build a variable inductor with what I have around my shop
> (lots
> > of bits n' pieces, but no cores). I need it to work in the area of 20-30
> mH,
> > 1A, 25-30 KHz.
> >
> > Is this something do-able? Is there something available off-the-shelf?
> >
> > Suggestions of how to go about it would be greatly appreciated.
> >
> > FBt
> >
>
>

## 519. FA:COLLINS NOS & USED PARTS + STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-14 23:57:24 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <EbSMj.189881$cQ1.82046@bgtnsc04-news.ops.worldnet.att.net>
Source record: 5256

Take a look at the Collins radio NOS and some used radio parts at:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

Have a few others coming later as well. Need to get rid of this stuff
as

a move in the near future. 73 Heytubeguy

## 520. Open form coils for sale - reprise

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 00:50:06 UTC
From: Henry <wa0goz@arrl.net>
Message-ID: <3J6dnZRiXrUmZp7VnZ2dnUVZ_gGdnZ2d@comcast.com>
Source record: 5257

Open form coils for sale.

I have the following new open form coils left for sale.

Air Dux coils

(4) 416T 1/2" dia X 2" long 15t/in $4 each
(3) 432T 1/2" dia X 2" long 30t/in $4 each
(3) 804T 1" dia X 3" long 4t/in $5 each
(2) 816T 1" dia X 3" long 16t/in $5 each

B & W coils

(1) 3008 5/8" dia X 1 7/8" long 32t/in $4

Unknown manufacturer coils (but look like Air Dux)

(3) 1 1/4" dia X 10" long 6t/in $18 each
(1) 1 1/4" dia X 10" long 10t/in $18 each
(1) 2" dia X 10" long 4t/in $18
(1) 2" dia X 2 1/4 long 10t/in $4
(1) 2" dia X 7/8" long 10t/in $2

Lot price totals $153. I will discount if you buy the whole lot.

Prices are plus shipping in CONUS. I need your zip code to figure
shipping.

Henry WA0GOZ
wa0goz@arrl.net

# 521. ** FLEA at MIT ** Sunday April 20th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 01:56:36 UTC
From: w1gsl@mit.edu
Message-ID: <48040b54$0$301$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 5258
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.info

This coming Sunday....
the Season's First.... FLEA at MIT

**********
**********

Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

*** !!!! In our Traditional GARAGE and the adjacent lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

<FF>
********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday April 20th 2008
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held on Albany between Mass Ave and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

SEASON PASS + Advance Seller Discount

A sellers discount season pass is available which
offers a 30% discount. By prepaying you get a
discount and earlier admission. See the registration form.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776 (M-F 9-5)

********** $1 buyers discount with hard copy of this notice ************

<FF>

Mail the coupon below by the 5th of the April to be a Prepaid Vendor.

FLEA at MIT 2008 Rates

SELLERS

To use your prepaid spaces the named vendor MUST be present.
Rates include one admission per space.

Season Pass Sellers admission to all seven meets this year
$99 First Space
$70 Each Additional space
Must be received by April 20th.

Advance $17 First space
$12 Additional Spaces
Must be received by the 10th of the month.

Gate Admission $20 First Space
$15 Additional Spaces
Admission is after the prepaid vendors.

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

cut and return
**********
FLEA at MIT 2008 Advance Space Application 4/08

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional
____Season Pass @ $99 ____ Additional Season Spaces @ $70 ___EBB @$70

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

**********
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
**********

# 522. Re: Availability of headset mic with RJ45 plug and 3.5mm plug for a Kenwood?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 08:40:27 UTC
From: Rick Frazier <rickf@rickfrazier.com>
Message-ID: <480469FB.9080302@rickfrazier.com>
Source record: 5259

Highland Ham wrote:
> fazamy wrote:
>
>> For easier ssb contesting, I want to be able to use a headset mic. My
>> headset mic has 2 mini stereo plugs one for a mic input and the other
>> for speaker output. My rig has a RJ45 jack on the front panel for a
>> mic input and a 3.5mm jack for audio outpput.
>> Is there a commercially available adapter cable that will allow me to
>> use my headset mic? --An adapter cable that can permit a 3.5mm to RJ45
>> mic input. Or is there a headset mic that has a RJ45 plug and a 35mm
>> plug?
>
> ========================================
> RJ45 plug (8 fingers)is the same as the one used for ethernet
> connections. So get a short ethernet cable with 2 fitted RJ45
> connectors ,cut-off 1 RJ45 connector + a piece of cable ,leaving a short
> piece of cable and a RJ45 connector.
> and fit on 2 of the 8 wires a mini stereo socket.
> Your transceiver manual/circuit diagramme should show which 2 of the 8
> wires are to be connected to the microphone . You should also be able to
> find the 2 wires for PTT.
>
> Just today I was shown a Yaesu transceiver with a microphone having a
> RJ45 connector for the microphone ,PTT and freq up & down push buttons.
> An ethernet cable plug fitted nicely in the transceiver's socket.
>
> Frank GM0CSZ / KN6WH
Perhaps Heil...
I have a Pro Set Quiet Phone and another ProSet headset and they use
1/8" for the mic connection. I have adapters for various radios,
including one for an RJ-45 If the brain is working this evening...
Don't remember the connector for the headphones, and am not able to get
to radio room right now to check...

--Rick AH7H

# 523. Www.3Asneakers.cn sell china cheap nike jordan1-23 af1&jordan dunk shox bally maxtn max87 max89 sneakers gucci prada timberland chanel mauri armani evisu hogan sneaker shoes wholesale lrg jeans bape jeans bbc jeand armani jeans redmonkey jeans seven jeans coogi jeans ect china cheapest wholesale

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 12:25:53 UTC
From: "www.3asneakers.cn wholesale nike gucci prada sneakers" <sneakers12@126.com>
Message-ID: <e2c6b483-a85f-4c25-b43a-b0e5169a8970@d26g2000prg.googlegroups.com>
Source record: 5260

(www.3asneakers.cn) Discount Prada Sneakers china wholesale good.
(www.3asneakers.cn) wholesale china lacoste mens turbo low mix gucci
sneaker shoes for cheap.
(www.3asneakers.cn) Order Sneakers from China nike wholesale trainers
(www.3asneakers.cn) wholesale china cheap nike air jordan sneaker
shoes.
(www.3asneakers.cn) ordan key chain for air force 1 customized nike
jordan tennis shoes
(www.3asneakers.cn) wholesale bape t-shirt ED Hardy t-shirt wholesale
gucci shoes china
(www.3asneakers.cn) branded perfume wholesale china nike dunk sneakers
(www.3asneakers.cn) suppliers for sneakers wholesale shoes from
china
(www.3asneakers.cn) china wholesale nike jordan gucci prada sneakers
cheapest nike,nike dunk sneaker necklaces.
(www.3asneakers.cn) China Nike Factory Jordan Suppliers louis vuitton
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(www.3asneakers.cn) wholesale y3 trainers supplier wholesale cheapest
bape shoes wholesale jordans Nike Basketball Sneakers gucci sneakers
china china nike
wholesaler.
(www.3asneakers.cn) sneakers at wholesale women prada sneakers
suppliers of branded clothing sneaker wholesale chinese jordan
supplier wholesale jordans from china 2008 prada sneaker for men
(www.3asneakers.cn) wholesale china cheap evisu jeans jordans iphone
wholesale china lv women sandal shoes wholesale
(www.3asneakers.cn) Nike Basketball Sneakers nike wholesale china
discoun chanel sandals china air jordans versace jeans china wholesale
coogi sweater china wholesale gucci sneakers wholesale
jordan.wholesale cheapest bape shoes,wholesale jordans.
(www.3asneakers.cn) wholesale china lacoste mens turbo low mix gucci
sneaker shoes for cheap.
(www.3asneakers.cn) wholesale china cheap evisu jeans
(www.3asneakers.cn) gucci men sneakers women gucci sneakers Nike
Sneaker discount
(www.3asneakers.cn) wholesale cheap authentic gucci prada sneakers
(www.3asneakers.cn) disquared2 chanel mauri discount sneaker shoes
bally sneakers wholesale china
(www.3asneakers.cn) wholesale cheap timberland Air force one boots
cheap ugg boots

(www.3asneakers.cn) wholesale men gucci prada sneakers women sneaker from china supplier
www.3asneakers.cn china wholesale mauri sneakers wholesale gucci sneakers sneakers wholesale cheap wholesale sneakers prada sneakers.com lv sandals wholesale gucci sneakers on sale louis vuitton sneakers mens gucci sneakers air jordans wholesale prada shop in usa wholesale
www.3asneakers.cn china nike dunk nike wholesale shoes china wholesale gucci sneakers evisu jeans jordan wholesale manufacturer in china buy D&G shoes in usa stores CHINA sneaker wholesale jordan spikike.com chanel sneakers Kid Prada Sneaker
www.3asneakers.cn sneakers wholesale prada sneakers website wholesale mauri shoes lv women sandal shoes wholesale prada americas cup sneakers mens prada sneakers women prada sneakers nike dunk sneakers authentic jordan sneakers jordan retro sneakers
www.3asneakers.cn discount nike sneakers nike sneakers retro nike air force ones nike dunks sb nike air max

## 524. Re: Availability of headset mic with RJ45 plug and 3.5mm plug for a Kenwood?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 13:09:21 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <f52Nj.82$8U1.7@newsfe06.lga>
Source record: 5261

The adapters are per radio, and radios like Icoms with RJ45's have RJ45's on the adapters. However, if I recall, OP had two mini plugs. Seems like the Heil adapters have a mini and a 1/4"

..

"Rick Frazier" <rickf@rickfrazier.com> wrote in message news:480469FB.9080302@rickfrazier.com...
> Highland Ham wrote:
>> fazamy wrote:

## 525. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 14:55:27 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4804c1dc$0$30206$4c368faf@roadrunner.com>
Source record: 5262

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:d5ce3035-b5a1-461e-989c-2076f2c0140d@u10g2000prn.googlegroups.com...
> Looking at how I would configure a 7360-type mixer in the front end of
> a low-band (say 80M and 40M) receiver.
>
> Method A: To me, the most obvious way to do it is to feed the RF into
> the 7360's grid, and feed the deflection plates with balanced local
> oscillator input at circa 10 or 20 V P-P. Put a center-tapped
> transformer to the anodes and pull the output out of a winding.

Its been a long time since I used a 7360 but I did it exactly as you
described.
I used a toriod broadband transformer to feed the 7360 deflection plates
because I didnt want to have to switch in tuned circuit.
The band switching arrangement was cumbersome enough asit was. This was the
front end for a rx project I never finished. It did seem to work pretty well
when used it as a rx converter in front of an old Halicrafter radio.

Jimmie

# 526. wholesale china sneaker nike jordan puma prada AF1 max shox r3 r4 tl tn nz oz ltd max 90 shoes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 17:25:28 UTC
From: ebayshoe@yahoo.cn
Message-ID: <f05dac1f-e8f7-4247-8c10-9394e0a32b35@z24g2000prf.googlegroups.com>
Source record: 5263

Welcome to visit www.china-sneakers.com
We Wholesale Cheap Jordan Shoes, Michael Jordan Shoes, Nike Jordan Basketball shoes, ... Jordan Shoes, Air Jordan Sneakers, Air Jordan Wholesale All of the Air Jordan sneakers have Nike Air in the shoes. Authentic quality Jordan Sneakers Custom Jordan Sneakers Wholesale Jordan Sneakers gucci sneakers prada sneakers,lv chanel coach dior DG DSQUARED2 DIESEL,miumiu handbags sneakers,t-shirts,jeans,jackets.We sale new Nike Sneakers,Air Jordan Sneakers,AIR FORCE 1S,Nike Dunks SB,
Bape Sta from nike outlets and factory stores, also Nike wholesale - Jordan Shoes. Nike Shoes, sport Shoes, Reebok Shoes,Basketball Shoes,prada,bapestar,Nike Shox,Dunks,Nike Flightposite ,Nike jordan Basketball ,K1X Chiefglider wholesale suppliers factory.We sale new Nike Sneakers,Air Jordan Sneakers,AIR FORCE 1S,Nike Dunks SB, Bape Sta
from nike Wholesale china nike jordans gucci prada sneakers at cheap price !!!

cheap gucci,prada dsquared2 sneakers wholesale

lacoste outlet
Max 90 Sneakers
wholesale Nike Air Max 91 Supplier
wholesale Nike Air Max 95 Shoes Supplier
wholesale Nike Air Max 97 Trainers
wholesale Nike Air Max 2003 Wholesale
wholesale Nike Air Max 2004 Shoes Wholesale
wholesale Nike Air Max 2005 Shop
wholesale Nike Air Max 2006 Shoes Shop
wholesale Nike Air Max 360 Catalogs
wholesale Nike Air Max Ltd Shoes Catalogs
wholesale Nike Air Max Tn Men's Shoes
wholesale Nike Air Max Tn 2 Women's Shoes
wholesale Nike Air Max Tn 3 Customize
wholesale Nike Air Max Tn 4 Shoes Customize
wholesale Nike Air Max Tn 6 Supply
wholesale Nike Shox NZ Shoes Supply
wholesale Nike Shox OZ Sale
wholesale Nike Shox TL Store
wholesale Nike Shox TL 2 Shoes Store
wholesale Nike Shox TL 3 Distributor
wholesale Nike Shox Bmw Shoes Distributor
wholesale Nike Shox Elite Shoes Manufacturer

wholesale Nike Shox Monster Manufacturer
wholesale Nike Shox R4 Running Shoes
wholesale Nike Shox R5 Mens Shoes
wholesale Nike Shox Ride Womens Shoes
wholesale Nike Shox Rival Shoes Wholesaler
wholesale Nike Shox Energia Wholesaler
wholesale Nike Shox LV Sneaker
wholesale Nike Shox Turbo Suppliers
wholesale Nike Shox Classic Shoes Suppliers
wholesale Nike Shox Dendara Trainer
wholesale Nike Air Jordan 1 Seller
wholesale Nike Air Jordan 2 Shoes Seller
wholesale Nike Air Jordan 3 Collection
wholesale Nike Air Jordan 4 Shoes Collection
wholesale Nike Air Jordan 5 Chaussure Shoes
wholesale Nike Air Jordan 6 Catalog
wholesale Nike Air Jordan 7 Shoes Catalog
wholesale Nike Air Jordan 8 Customized
wholesale Nike Air Jordan 9 Shoes Customized
wholesale Nike Air Jordan 10 Wholesalers
wholesale Nike Jordan 11 Shoes Wholesalers
wholesale Nike Air Jordan 12 Factory
wholesale Nike Air Jordan 13 Shoes Factory
wholesale Nike Air Jordan 14 Shoes Sell
wholesale Nike Air Jordan 16 Exporter
wholesale Nike Air Jordan 17 Shoes Exporter
wholesale Nike Air Jordan 18 Offer
wholesale Nike Air Jordan 19 Shoes Offer
wholesale Nike Air Jordan 20 Manufacture
wholesale Nike Jordan 21 Shoes Manufacture
wholesale Nike Air Force 1 Low Directory
wholesale Air Force 1 High Shoes Directory
wholesale Nike Air Force 1 Custom Importer
wholesale Air Force 1 Dollar Shoes Importer
wholesale Nike Air Force 1 Clear Sales
wholesale Air Force 1 Carving Shoes Sales
wholesale Timberland Boots High Offers
wholesale Timberland Boots Low Sell
wholesale Timberland Boots Mid Shoes Buyer
wholesale Timberland Boots Womens Buyer
wholesale Adidas Good Year Buy
wholesale Adidas Running Shoes Buy
wholesale Adidas Football Shoes Selection
wholesale Adidas Basketball Shoes Discount
wholesale Adidas 35 Years 35th Anniversary
wholesale Adidas T MAC 3.5 4.5 5 6
wholesale Adidas 35 Years 35th Anniversary
Jordans Wholesale
Cheap Jordans Wholesale
Jordans Retro Wholesale

Air Jordans Wholesale
Nike Shoes Wholesale China
Discount Jordans Price Wholesale
Wholesale Nike Distributor
Wholesale Nike Sneaker
Wholesale Nike Air Force 1
Air Clear Force One Wholesale
Nike Air Force Wholesale
Buy Jordans Wholesale
Wholesale Nike Tennis Shoes
Jordans Retro Wholesale
Wholesale Kid Jordans
Wholesale Nike Dunk
Authentic Jordans Wholesale
Nike Shoes Wholesale China
Wholesale Custom Jordans
Air China Jordans Wholesale
Jordans Retro Wholesale
Nike Air Jordan Wholesale
Nike Golf Wholesale
Wholesale Jordans
Wholesale Nike Shox
Wholesale Basketball Shoes Nike
Air Jordans Price Wholesale
Jordans Kid Wholesale
Wholesale Air Force One And Jordans
Jordans Shoes Wholesale
Wholesale Air Jordans
Air Jordans At Wholesale Price
Wholesale Nike Tennis Shoes
Wholesale NIKE Sneakers from our Nike factory to Nike shop & Nike store,sale and Wholesale all of Nike stock Shoes,we have many type of NIKE Sneakers :Nike discount Shoes,Nike cheap Shoes,Nike stock Shoes (Nike Trainers, Nike Sneakers,Nike Running Shoes,Nike Basketball Shoes,Nike Discount Shoes,Nike Cheap Shoes,footwear, Sports Shoes )Nike Shoes Wholesale sizes include:Nike men's Shoes,Nike women's Shoes,Nike mens Shoes,Nike womens Shoes, Nike men Shoes,Nike women Shoes,Nike kids Shoes, Nike child Shoes.Nike discount Shoes,Nike in www.china-sneakers.com
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## 527. Re: Cable repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-15 20:13:18 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <0b32762a-a7d7-4f3b-af66-9281c2e24fdd@n1g2000prb.googlegroups.com>
Source record: 5264

>"AF6AY" <LenAnderson@ieee.org> wrote in message
>news:3e8ab734-7c72-46bf-89c3-730c4175f571@n1g2000prb.googlegroups.com...
>On Apr 6, 9:58?pm, "Jimmie D" <GFEN...@carolina.rr.com> wrote:
>> I had a backlog of a couple dozen patch cables to repair. Usually ony one
>> end is damaged so I use the capacitance function on my multimeter to
>> measure
>> the wire to wire capacitance from each end of the wire. When I find a wire
>> that reads near 0 capcitance compared to the others I know which wire it
>> is
>> and which end it is on.. I was surprised none of my co-workers were aware
>> of
>> this trick as a lot of them have near 30 years of experience an are no
>> dummies so I thought I would pass this along.
>>
>> Jimmie
>
>I hate to say this, but if you want to measure continuity of a wire or
>a coax center conductor, you use the OHMS function. [sigh...]

Don't get all bent out of shape because someone comments on your post.

Please get your attributes correct on who said what.

>The ohmmeter function doesnt tell you which end is bad.

Absolutely true but with a conditional (see below).

What is lacking is the METHOD and WHY it works. It can be said this
way:

Cables all have distributed capacitance between conductors. Wire
PAIRS,
shielded from all other pairs in a cable, can usually use
manufacturer's
specs on capacity per hundred feet to locate a break or an open by
measuring the capacity at one end.

1. If the capacity measures very low, the break is at that end.

2. If the capacity measures to the nominal value for that length,
a break COULD be at the OTHER end...or it is really a good
cable with no break. Only an Ohms test could determine which
condition would apply there.

3. If the capacity measures somewhere between very low and nominal,
the break is SOMEWHERE along the length of the wire pair.

For short wire pairs of 20 feet or less, (3) might not be useful.

One can generate the value of capacity per whatever length by
measuring
a good wire pair run and recording it for future checks.

The telephone folks have been measuring line pairs for at least a century, all without measuring any capacity of wire pairs, using only resistance. That's an extreme case since a loop to a central office can be as long as 5 miles.

At Rocketdyne Division of Boeing Aircraft Field Test Labs in the Santa Susannah mountains west of Canoga Park, CA, the 'Coca' space shuttle Main Engine test stand has a 1200 foot interconnecting tunnel from the engine test stand to the control blockhouse. Hundreds of wire pairs are laid in that plus at least another 400 feet (give or take) from each end of the tunnel to sensors and recorders. Techs there have been using the capacity measurement technique on wire pairs since at least 1980 (when I visited there first time). There are dozens of splices along each wire pair run, most being changes in sensor functions for various engines. Another extreme case, yes, few homebrewers will be making rocket engines with a ton (plus) of thrust. :-)

>I use this on LAN jumpers mike cords, foot switches,coax connectors, cannon
>plugs...
>where the cable is known to be open but the question is now just which end.

When it comes to MULTIPLE WIRE conductors in any cable, a capacity measurement is only approximate. Ideally, all other wires except the one being tested should be connected in common. If the other wires are 'floating' (unconnected to anything), they may or may not ADD to the capacitance of the test conductor to a local common. There is great variation on cable lay-ups (positioning within the cable bundle) and thus the distributed capacities will vary.

In cable assembly production testing, it is common to use a standard test fixture of matching connectors with each wire forming a giant conductive loop, a single wire that can drive an indicator or meter or buzzer for continuity. Over 90% of such cable assemblies will pass on the first test; the rest go to QC techs who inspect more closely. Yes, that is for production, not single cable checks.

Not all DMMs have built-in capacity measurement functions. A Simpson 260 doesn't. I have three DMMs but only the 4 1/2 digit one has such a capacity function. I use an old Data Precision handheld capacity meter or Neil Heckt's handy AADE L-C Meter for measuring capacity down to +/- 0.1 pFd resolution.

Coaxial cable is quite another story but a gross, low-frequency check can be done using just a capacity measurement...PLUS an Ohms check with or without a short or 50 Ohm dummy load at the other end. That short or dummy load uses the outer conductor as the return/common, avoids needing to run a common wire for Ohms continuity checks. To

get
a fairly accurate location of a coax cable break or short, an RF check
can be done using minimum and maximum impedance magnitude versus
frequency (and thus wavelength if the velocity of propagation of the
coax cable is known). See Ham Radio magazine, May 1978, for quick
calculations on a scientific pocket calculator that doesn't require
a Smith Chart to use RF bridge data.

73, Len AF6AY

af6ay@arrl.net
LenAnderson@ieee.org

# 528. FA: MORE COLLINS PARTS-3 DAY ONLY

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-18 16:05:56 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <EF3Oj.108482$D_3.79001@bgtnsc05-news.ops.worldnet.att.net>
Source record: 5265

LISTED THE LAST OF MY COLLINS Mod Kit Parts + other stuff too; see at:

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZheytubeguy

Tnx, heytubeguy

## 529. Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-19 10:36:00 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <66u08mF1soskqU1@mid.individual.net>
Source record: 5266

I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of break-in operation) that employs a 2E26 tube in the PA. With ICAS operation I can get 27 watts of RF out with a driving power of 0.17 wattts (according to my RCA sheet). I want most of my "design" efforts and interest to centre around the PA stage. I think I could cope with that at least.

Can anyone please point me to a suitable solid-state exciter circuit? I want the Tx to cover any HF band (I'll use plug-in coils). TIA.

# 530. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-19 15:38:31 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <XloOj.127233$yE1.47759@attbi_s21>
Source record: 5267

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:66u08mF1soskqU1@mid.individual.net...
>I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of
>break-in
> operation) that employs a 2E26 tube in the PA. With ICAS operation I can
> get
> 27 watts of RF out with a driving power of 0.17 wattts (according to my
> RCA
> sheet). I want most of my "design" efforts and interest to centre around
> the PA stage. I think I could cope with that at least.
>
> Can anyone please point me to a suitable solid-state exciter circuit? I
> want
> the Tx to cover any HF band (I'll use plug-in coils). TIA.
>
Why solid state? Since you're using the 2E26, you already need a high
Voltage supply, and a single stage crystal oscillator can operate from the
same supply without the need for a low Voltage supply for a multistage solid
state exciter. (It's gonna take more than one to get where you want to be.)
A tube crystal oscillator can be found in most old ARRL handbooks, using a
5763 or similar tube. Or, even a 2 stage oscillator buffer/multiplier
utilizing a triode/pentode 6EA8 or similar.

W4ZCB

# 531. cheap wholesale prada shoes gucci shoes lacoste shoes dunk shoes puma shoes air force one shoes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-19 15:58:22 UTC
From: ebayshoe2@yahoo.cn
Message-ID: <6b68f9bb-c6bd-4a36-820c-cb873d24c283@x19g2000prg.googlegroups.com>
Source record: 5268

Welcome to visit www.china-sneakers.com
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Bape Sta from nike outlets and factory stores, also Nike wholesale - Jordan Shoes. Nike Shoes, sport Shoes, Reebok Shoes,Basketball Shoes,prada,bapestar,Nike Shox,Dunks,Nike Flightposite ,Nike jordan Basketball ,K1X Chiefglider wholesale suppliers factory.We sale new Nike Sneakers,Air Jordan Sneakers,AIR FORCE 1S,Nike Dunks SB, Bape Sta
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wholesale Nike Air Max 2003 Wholesale
wholesale Nike Air Max 2004 Shoes Wholesale
wholesale Nike Air Max 2005 Shop
wholesale Nike Air Max 2006 Shoes Shop
wholesale Nike Air Max 360 Catalogs
wholesale Nike Air Max Ltd Shoes Catalogs
wholesale Nike Air Max Tn Men's Shoes
wholesale Nike Air Max Tn 2 Women's Shoes
wholesale Nike Air Max Tn 3 Customize
wholesale Nike Air Max Tn 4 Shoes Customize
wholesale Nike Air Max Tn 6 Supply
wholesale Nike Shox NZ Shoes Supply
wholesale Nike Shox OZ Sale
wholesale Nike Shox TL Store
wholesale Nike Shox TL 2 Shoes Store
wholesale Nike Shox TL 3 Distributor
wholesale Nike Shox Bmw Shoes Distributor
wholesale Nike Shox Elite Shoes Manufacturer

wholesale Nike Shox Monster Manufacturer
wholesale Nike Shox R4 Running Shoes
wholesale Nike Shox R5 Mens Shoes
wholesale Nike Shox Ride Womens Shoes
wholesale Nike Shox Rival Shoes Wholesaler
wholesale Nike Shox Energia Wholesaler
wholesale Nike Shox LV Sneaker
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wholesale Nike Shox Classic Shoes Suppliers
wholesale Nike Shox Dendara Trainer
wholesale Nike Air Jordan 1 Seller
wholesale Nike Air Jordan 2 Shoes Seller
wholesale Nike Air Jordan 3 Collection
wholesale Nike Air Jordan 4 Shoes Collection
wholesale Nike Air Jordan 5 Chaussure Shoes
wholesale Nike Air Jordan 6 Catalog
wholesale Nike Air Jordan 7 Shoes Catalog
wholesale Nike Air Jordan 8 Customized
wholesale Nike Air Jordan 9 Shoes Customized
wholesale Nike Air Jordan 10 Wholesalers
wholesale Nike Jordan 11 Shoes Wholesalers
wholesale Nike Air Jordan 12 Factory
wholesale Nike Air Jordan 13 Shoes Factory
wholesale Nike Air Jordan 14 Shoes Sell
wholesale Nike Air Jordan 16 Exporter
wholesale Nike Air Jordan 17 Shoes Exporter
wholesale Nike Air Jordan 18 Offer
wholesale Nike Air Jordan 19 Shoes Offer
wholesale Nike Air Jordan 20 Manufacture
wholesale Nike Jordan 21 Shoes Manufacture
wholesale Nike Air Force 1 Low Directory
wholesale Air Force 1 High Shoes Directory
wholesale Nike Air Force 1 Custom Importer
wholesale Air Force 1 Dollar Shoes Importer
wholesale Nike Air Force 1 Clear Sales
wholesale Air Force 1 Carving Shoes Sales
wholesale Timberland Boots High Offers
wholesale Timberland Boots Low Sell
wholesale Timberland Boots Mid Shoes Buyer
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wholesale Adidas T MAC 3.5 4.5 5 6
wholesale Adidas 35 Years 35th Anniversary
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Nike Shoes Wholesale China
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Wholesale Nike Distributor
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Wholesale Nike Air Force 1
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Wholesale Custom Jordans
Air China Jordans Wholesale
Jordans Retro Wholesale
Nike Air Jordan Wholesale
Nike Golf Wholesale
Wholesale Jordans
Wholesale Nike Shox
Wholesale Basketball Shoes Nike
Air Jordans Price Wholesale
Jordans Kid Wholesale
Wholesale Air Force One And Jordans
Jordans Shoes Wholesale
Wholesale Air Jordans
Air Jordans At Wholesale Price
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Wholesale NIKE Sneakers from our Nike factory to Nike shop & Nike store,sale and Wholesale all of Nike stock Shoes,we have many type of NIKE Sneakers :Nike discount Shoes,Nike cheap Shoes,Nike stock Shoes (Nike Trainers, Nike Sneakers,Nike Running Shoes,Nike Basketball Shoes,Nike Discount Shoes,Nike Cheap Shoes,footwear, Sports Shoes )Nike Shoes Wholesale sizes include:Nike men's Shoes,Nike women's Shoes,Nike mens Shoes,Nike womens Shoes, Nike men Shoes,Nike women Shoes,Nike kids Shoes, Nike child Shoes.Nike discount Shoes,Nike in www.china-sneakers.com
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# 532. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-19 21:08:37 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrng0knql.odh.bit-bucket@shell.config.com>
Source record: 5269

On Sat, 19 Apr 2008 15:38:31 GMT, Harold E. Johnson wrote:
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:66u08mF1soskqU1@mid.individual.net...
>>I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of
>>break-in
>> operation) that employs a 2E26 tube in the PA. With ICAS operation I can
>> get
>> 27 watts of RF out with a driving power of 0.17 wattts (according to my
>> RCA
>> sheet). I want most of my "design" efforts and interest to centre around
>> the PA stage. I think I could cope with that at least.
>>
>> Can anyone please point me to a suitable solid-state exciter circuit? I
>> want
>> the Tx to cover any HF band (I'll use plug-in coils). TIA.
>>
> Why solid state? Since you're using the 2E26, you already need a high
> Voltage supply, and a single stage crystal oscillator can operate from the
> same supply without the need for a low Voltage supply for a multistage solid
> state exciter. (It's gonna take more than one to get where you want to be.)
> A tube crystal oscillator can be found in most old ARRL handbooks, using a
> 5763 or similar tube. Or, even a 2 stage oscillator buffer/multiplier
> utilizing a triode/pentode 6EA8 or similar.

IIRC, most any 'simple' 6146 transmitter can be adapted to the 2E26 --
with minor changes in high voltage and grid bias.

The ARRL Handbooks from circa 1955->1975 seemed to always have
a "75 Watt Novice Transmitter" project.

GL ES 73
Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

# 533. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 02:51:22 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0804192244400.5666@darkstar.example.org>
Source record: 5270

On Sat, 19 Apr 2008, Richard wrote:

> I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of break-in
> operation) that employs a 2E26 tube in the PA. With ICAS operation I can get
> 27 watts of RF out with a driving power of 0.17 wattts (according to my RCA
> sheet). I want most of my "design" efforts and interest to centre around
> the PA stage. I think I could cope with that at least.
>
> Can anyone please point me to a suitable solid-state exciter circuit? I want
> the Tx to cover any HF band (I'll use plug-in coils). TIA.
>

In the fall of 1971, there was a two part article in QST for what may have been the ultimate CW transmitter. It was solid state up till the driver, a 6GK6, and then a pair of 6146's. It used the uncommon design, for a cw transmitter, of a VFO that covered only a fixed range, and then it was mixed up to the signal frequency. I'm working from the 1972 Handbook, but I seem to recall the two part nature of the original had the first part as a simpler version that was expanded in the second part.

But any existing solid state transmitter is going to put out more than you'll need for the 2E26. Just pick a low power one and build it.

Michael VE2BVW

## 534. New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 14:08:25 UTC
From: "William E. Sabin" <w.sabin@mchsi.com>
Message-ID: <t7IOj.128581$yE1.92888@attbi_s21>
Source record: 5271

QRZ.COM "W0IYH" has a picture of my new book "Discrete-Signal Analysis and Design".

It is intended for class-room students and advanced at-home experimenters with strong interests in
undergraduate-level mathematics. It discusses in a conversational style an introductory (see page 2) tutorial coverage of many aspects of the title subject. The book includes a compact disk that contains a virtually-free copy of the world-famous and very sophisticated program MATHCAD, version 14.0. This program can be used in a very elementary mode at home by new beginners and also in a very advanced mode by mathematically-sophisticated engineers. The software has a perpetual lifetime, and can be used "forever" for a multitide of applied-math calculation projects. Familiarity and acquired skill with the math program can in themselves be a very rewarding experience. The program has excellent graphing abilities, and the results can be printed, archived and published
(and e-mailed) "forever". An on-disk "Mathcad User Guide" helps us to get started.

Page one of the Introduction Chapter contains the following:

"We can never become too well educated about fundamentals and about our aiblity to view them from a mathematical perpective. The modern emphasis on math literacy is right on target."

This is the main idea of and the basic reason for the book.

See the Wiley website www.wiley.com for more information about the book and the suggested list price. Other online bookstores may have the
book-plus-disk at a reduced price. Be sure that the disk is included in the price.

Bill W0IYH

# 535. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 14:50:41 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <6713i5F2n9hsgU1@mid.individual.net>
Source record: 5272

"Michael Black" <et472@ncf.ca> wrote in message
news:Pine.LNX.4.64.0804192244400.5666@darkstar.example.org...
> On Sat, 19 Apr 2008, Richard wrote:
>
>> I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of
>> break-in
>> operation) that employs a 2E26 tube in the PA. With ICAS operation I can
>> get
>> 27 watts of RF out with a driving power of 0.17 wattts (according to my
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>> sheet). I want most of my "design" efforts and interest to centre around
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>> Can anyone please point me to a suitable solid-state exciter circuit? I
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>> the Tx to cover any HF band (I'll use plug-in coils). TIA.
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> In the fall of 1971, there was a two part article in QST for what may have
> been the ultimate CW transmitter. It was solid state up till the driver,
> a 6GK6, and then a pair of 6146's. It used the uncommon design, for a cw
> transmitter, of a VFO that covered only a fixed range, and then it was
> mixed up to the signal frequency. I'm working from the 1972 Handbook, but
> I seem to recall the two part nature of the original had the first part
> as a simpler version that was expanded in the second part.
>
> But any existing solid state transmitter is going to put out more than
> you'll need for the 2E26. Just pick a low power one and build it.
>
>
> Michael VE2BVW

I'm minded to have the PA valve input circuit have an impedance of 50 Ohms.
I need to fiure out then what the input circuit for the 2E26 would look
like. I've no idea at the moment, not being much of a homebrewer at present.

## 536. New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 15:09:44 UTC
From: "William E. Sabin" <w.sabin@mchsi.com>
Message-ID: <Y0JOj.128637$yE1.84159@attbi_s21>
Source record: 5273

One other thing. The reason for my post here about my new book, and also the review on page 70 of the May 2008 QST, is to convey information that might be interesting and valuable to some of the members of this group and to QST readers. It is not motivated by a search for financial profit, even though the publisher does pay a small royalty to the author. That total amount is insignifiant compared to the author's substantial personal investment in time (time is not free) and materials over a three year interval.

Bill W0IYH

## 537. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 15:35:40 UTC
From: K <K@spam.net>
Message-ID: <480b62f0$0$12921$4c368faf@roadrunner.com>
Source record: 5274

Yea, its proably a great book, but at $125 bucks a copy, it outa be!!

K

"William E. Sabin" <w.sabin@mchsi.com> wrote in message
news:Y0JOj.128637$yE1.84159@attbi_s21...
> One other thing. The reason for my post here about my new book, and also
> the review on page 70 of the May 2008 QST, is to convey information that
> might be interesting and valuable to some of the members of this group and
> to QST readers. It is not motivated by a search for financial profit, even
> though the publisher does pay a small royalty to the author. That total
> amount is insignifiant compared to the author's substantial personal
> investment in time (time is not free) and materials over a three year
> interval.
>
> Bill W0IYH
>

# 538. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 17:27:29 UTC
From: "William E. Sabin" <w.sabin@mchsi.com>
Message-ID: <52LOj.75136$TT4.44404@attbi_s22>
Source record: 5275

Hello K,

The Mathcad program itself sells for several hundred dollars. The PTC Company publishes this program, and it alone is quite expensive. The disk in my book is part of a promotional plan by PTC to encourage the sales and use of the Mathcad program. Even if the book itself is of no value, which I do not believe, the Mathcad is of considerable value. Go to www.PTC.com if you want to learn more about Mathcad.

Bill W0IYH

"K" <K@spam.net> wrote in message
news:480b62f0$0$12921$4c368faf@roadrunner.com...
> Yea, its proably a great book, but at $125 bucks a copy, it outa be!!
>
> K
>
> "William E. Sabin" <w.sabin@mchsi.com> wrote in message
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>> total amount is insignifiant compared to the author's substantial
>> personal investment in time (time is not free) and materials over a three
>> year interval.
>>
>> Bill W0IYH

# 539. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 18:03:02 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <vpmdnbxAnfrPGJbVnZ2dnUVZ_o3inZ2d@posted.cpinternet>
Source record: 5276

William E. Sabin wrote:

> Hello K,
>
> The Mathcad program itself sells for several hundred dollars. The PTC
> Company publishes this program, and it alone is quite expensive. The disk in
> my book is part of a promotional plan by PTC to encourage the sales and use
> of the Mathcad program. Even if the book itself is of no value, which I do
> not believe, the Mathcad is of considerable value. Go to www.PTC.com if you
> want to learn more about Mathcad.

<snip>

I have Mathcad 4.0; would it be sufficient? If so, is the book available
separately?

Michael

## 540. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 19:35:13 UTC
From: "William E. Sabin" <w.sabin@mchsi.com>
Message-ID: <RVMOj.128925$yE1.76554@attbi_s21>
Source record: 5277

Hello Michael,

Mathcad 4.0 was sold in 1993. I had it at that time (15 years ago) but it is very ancient these days. If your computer is fairly modern and has a CD drive, I suggest "bite the bullet" and get the book with the almost freebie version 14.0 program attached. If you are using a very early computer that has no CD drive and if your version 4.0 works OK, you could try it. I believe it is possible to get the book alone. I personally would not want to waste my valuable time with that approach. Also, the CD has the Mathcad User Guide, which is very useful. I can't emphasize too much the excellence of the new 14.0 version.

Bill W0IYH

"msg" <msg@_cybertheque.org_> wrote in message
news:vpmdnbxAnfrPGJbVnZ2dnUVZ_o3inZ2d@posted.cpinternet...
> William E. Sabin wrote:
>
>> Hello K,
>>
>> The Mathcad program itself sells for several hundred dollars. The PTC
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>> and use of the Mathcad program. Even if the book itself is of no value,
>> which I do not believe, the Mathcad is of considerable value. Go to
>> www.PTC.com if you want to learn more about Mathcad.
>
> <snip>
>
> I have Mathcad 4.0; would it be sufficient? If so, is the book available
> separately?
>
> Michael

## 541. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 20:55:00 UTC
From: Reginald Beardsley <user@example.net>
Message-ID: <E4OOj.1102$ix6.32@newssvr11.news.prodigy.net>
Source record: 5278

K wrote:
> Yea, its proably a great book, but at $125 bucks a copy, it outa be!!
>
> K
>
> "William E. Sabin" <w.sabin@mchsi.com> wrote in message
> news:Y0JOj.128637$yE1.84159@attbi_s21...
>
>> One other thing. The reason for my post here about my new book, and
>> also the review on page 70 of the May 2008 QST, is to convey
>> information that might be interesting and valuable to some of the
>> members of this group and to QST readers. It is not motivated by a
>> search for financial profit, even though the publisher does pay a
>> small royalty to the author. That total amount is insignifiant
>> compared to the author's substantial personal investment in time (time
>> is not free) and materials over a three year interval.
>>
>> Bill W0IYH
>>
>

Sad part is that courtesy of the IRS rules, it is a gamble to publish a small run, specialty book like this at that price. Used to be different, but that's the reality now. In any event writing one is more a labor of love than anything else unless you need the publication to get tenure.

I haven't seen the book and wouldn't buy it because I've been doing this stuff for 25+ years and already have dozens of books on signal processing. But if you don't have that sort of background and are interested in software radio, you really need this or something like it.

There is no substitute for doing the math yourself.

Table of contents looks good though I wonder if it's not a proposal outline that Wiley has failed to update rather than the actual table of contents. "Discuss the MathCAD program" doesn't seem like a good section title.

Have Fun!
Reg

## 542. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 23:16:37 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <D9QOj.67262$y05.13042@newsfe22.lga>
Source record: 5279

"William E. Sabin" <w.sabin@mchsi.com> wrote in message
news:t7IOj.128581$yE1.92888@attbi_s21...
> QRZ.COM "W0IYH" has a picture of my new book "Discrete-Signal Analysis and
> Design".
>
> > Bill W0IYH

Congrats on the new book Bill!

73

Pete k1zjh

# 543. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-20 23:47:26 UTC
From: "Jim, K7JEB" <k7jeb_2@yahoo.com>
Message-ID: <480BD60E.6090308@yahoo.com>
Source record: 5280

William E. Sabin wrote:
> ...The book includes a compact disk that contains a virtually-free
> copy of the world-famous and very sophisticated program MATHCAD, version
> 14.0. This program can be used in a very elementary mode at home by new
> beginners and also in a very advanced mode by mathematically-sophisticated
> engineers. The software has a perpetual lifetime, and can be used "forever"
> for a multitide of applied-math calculation projects.

First of all, allow me to add my congratulations to you, Bill, for publishing a new book. It sounds like a valuable addition to both professional and amateur libraries.

Just so one knows, just what are the limitations of the included Mathcad program. Is it somewhat like a 'student version' or 'promotional version' that is limited in the number of steps or number of variables that can be programmed? Or are the limitations more exotic, such as not supporting regression analysis and that kind of thing? Not that such a limitation would be a show-stopper. One may learn a great deal from student copies of programs like PSpice. It's just that it would be nice to know this going in.

Jim, K7JEB, Glendale, AZ, USA

## 544. Mathcad version differences, etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 06:18:31 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <er2dnY-QZL0urJHVnZ2dnUVZ_sKqnZ2d@cpinternet>
Source record: 5281

The recent thread discussing W0IYH's new book got me researching Mathcad version differences and availability of add-ons; I found essentially nothing on the 'net that summarizes versions differences and suspect that reading the release notes from each version would be required to do the job. Has anyone seen such an analysis?

I have version 4.0, and from reading archived newsgroup posts it seems that 4.0 and 5.0 were highly regarded, with increasing complaints arising after 6.0. Worksheet (.mcd) file formats were ascii until 7.0, and evidently more recent versions are xml based (do these no longer use a binary file format?) I would like to continue to use 4.0, and I also appreciate that this version is unencumbered with intrusive protection schemes (I choose tools that are designed to work for me and not against me), doesn't need a mysterious installation procedure (just execute the product from its target directory), and has a small footprint but is not memory constrained. Has anyone ever documented the ascii worksheet file format (which could permit a re-writing of later version files to be backward compatible with earlier versions within the constraints of common features)?

Does anyone happen to have the DSP "function pack" compatible with 4.0? As described in advertising literature that came with my version, it offers some excellent filter design tools that would provide interactivity missing from the tools that I've been using, and I would enjoy trying them ;)

Michael

## 545. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 09:47:27 UTC
From: "William E. Sabin" <w.sabin@mchsi.com>
Message-ID: <PoZOj.76113$TT4.6192@attbi_s22>
Source record: 5282

It's the actual Table of Contents.

Bill W0IYH

> Table of contents looks good though I wonder if it's not a proposal
> outline that Wiley has failed to update rather than the actual table of
> contents. "Discuss the MathCAD program" doesn't seem like a good section
> title.
>
> Have Fun!
> Reg

## 546. Grid circuits for RF power amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 16:04:02 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <673s8qF2mied6U1@mid.individual.net>
Source record: 5283

I need some information on an appropriate input circuit for a small RF power amplifier using a 2E26 operating in the HF region. Output would be about 27 watts. Drive input power about 0.12 watts.

I want the input circuit of the PA to present a 50 or 75 Ohm load to the driver (the exciter - probably a CW QRP rig - will supply about 0.12 watts). Perhaps (I muse) it would be good, (certainly it would be convenient) if the input circuit was NOT a tuned input circuit, but see below.

Questions (that incidentally show my thinking):

Can anyone point me to a website that gives the design data for an appropriate circuit given the things I have mentioned?

Is it okay to have an untuned grid circuit? I muse no problem if the exciter has a pi-network output circuit. I just wonder that if the exciter uses a pi network, if that would represent both the exciter anode/collector tank circuit, and the grid tank circuit. (So, really there would be a tuned input circuit - the output pi-network of the exciter). (Just shows I know nothin', I'm not even certain whether solid stage rigs use Pi-networks to match with the load).

Any thoughts on biasing arrangement - fixed bias, drive bias, or cathode bias? (Perhaps fixed bias is best - no need for a clamp valve). Grid bias needs to be about - 45 volts. Muse that a simple RF choke supplying the bias to grid would suffice.

So, basically, I want to be able to plug a QRP rig into the PA, tune up the QRP rig and the plate circuit of PA, and that's it.

## 547. Re: Grid circuits for RF power amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 17:20:13 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <IqydnSRh2vVQUZHVnZ2dnUVZ_qHinZ2d@web-ster.com>
Source record: 5284

On Mon, 21 Apr 2008 17:04:02 +0100, Richard wrote:

> I need some information on an appropriate input circuit for a small RF
> power amplifier using a 2E26 operating in the HF region. Output would be
> about 27 watts. Drive input power about 0.12 watts.
>
> I want the input circuit of the PA to present a 50 or 75 Ohm load to the
> driver (the exciter - probably a CW QRP rig - will supply about 0.12
> watts). Perhaps (I muse) it would be good, (certainly it would be
> convenient) if the input circuit was NOT a tuned input circuit, but see
> below.
>
> Questions (that incidentally show my thinking):
>
> Can anyone point me to a website that gives the design data for an
> appropriate circuit given the things I have mentioned?
>
> Is it okay to have an untuned grid circuit? I muse no problem if the
> exciter has a pi-network output circuit. I just wonder that if the
> exciter uses a pi network, if that would represent both the exciter
> anode/collector tank circuit, and the grid tank circuit. (So, really
> there would be a tuned input circuit - the output pi-network of the
> exciter). (Just shows I know nothin', I'm not even certain whether solid
> stage rigs use Pi-networks to match with the load).
>
> Any thoughts on biasing arrangement - fixed bias, drive bias, or
> cathode bias? (Perhaps fixed bias is best - no need for a clamp valve).
> Grid bias needs to be about - 45 volts. Muse that a simple RF choke
> supplying the bias to grid would suffice.
>
> So, basically, I want to be able to plug a QRP rig into the PA, tune up
> the QRP rig and the plate circuit of PA, and that's it.

Elsewhere you say that a 2E26 needs 170mW, here you're going to give it
120?

If you want to minimize the drive power you're going to have to use a
tuned grid circuit; having such a power-efficient design is going to make
your circuit susceptible to oscillation, as it'll take less than 1% of
the output power to come back in to the grid circuit and cause problems.
So a 120 (or 170) milliwatt input implies both a tuned grid circuit and
neutralization.

If you want to go broad-band, you need some dissipative elements in the
grid circuit to broaden the response. Something like a plain old

resistor would do quite well. With resistive loading, your grid circuit will both be broader band _and_ your need for neutralization will be far less. I'd be tempted to think along the lines of a 1W QRP rig and resistor in the grid circuit that dissipates 800mW. I'll leave the calculations to you, but this will broaden your grid circuit response considerably, ease your bias network design problem, and reduce (or eliminate) the need for neutralization and/or obsessively high degrees of isolation in your circuit layout.

Have fun -- take everything I just said with a grain of salt, because I've only ever designed transistor PA stages.

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

Need to learn how to apply control theory in your embedded system?
"Applied Control Theory for Embedded Systems" by Tim Wescott
Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

## 548. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 17:53:55 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <Yw4Pj.58179$pm2.4818@en-nntp-04.dc1.easynews.com>
Source record: 5285

William,

Given that Mathcad is included, I don't think the price is unreasonable. However, perhaps you'd consider using one of the free math manipulation programs such as Octave in the future? It really would make it more accessible to amateurs. Nevertheless, thank you for writing the book and getting it published -- it definitely will help some people and is a good addition to amateur radio literature.

At least Mathcad is much cheaper than Matlab. The MathWorks (publishers of Matlab) has pretty much completely left out the hobbyist community... the full version of the software is quite expensive (thousands of dollars), whereas the "student" version (at a pretty reasonable $99, although each and every "toolbox" is then an additional $59) require formal proof of student status, which of course hobbyists generally don't have. :-(

---Joel

## 549. Re: Mathcad version differences, etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 18:09:58 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <_L4Pj.110143$6i4.81907@en-nntp-03.dc1.easynews.com>
Source record: 5286

Michael,

"msg" <msg@_cybertheque.org_> wrote in message
news:er2dnY-QZL0urJHVnZ2dnUVZ_sKqnZ2d@cpinternet...
> The recent thread discussing W0IYH's new book got me researching Mathcad
> Has anyone seen such an analysis?

I haven't, but I can tell you that version 12 was still just an "enter the product code and it works anywhere" whereas by version 2001 it required Internet activation (presumably with a finite number of activations -- not good if you upgrade computers regularly and and to keep it for awhile). (The versions went 12, 2000, 2001, 2001i, 13, and now 14, AFAIK.)

The biggest improvement for me between version 12 and 2001 was that they let you have scales on both the left- and right-hand sides of a graph. There were of course other new features and what-not, that's just the only one I remember caring that much about!

The change to an XML file structure (it's ASCII-readable) allows for easy searching of MathCAD files and -- ostensibly -- being able to parse, convert, and create your own MathCAD worksheets programmatically, at least if they actually documented the structure ("schema") reasonably well. (Some companies change to XML just to satisfy some big corporate "checklist" of features required of software and don't publish -- or incompletely publish, as with Microsoft Office -- their schemas.)

---Joel

# 550. UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 21:27:48 UTC
From: markus wolfgart <markus.wolfgart@dlr.de>
Message-ID: <674f6kF2mnuvtU1@mid.dfncis.de>
Source record: 5287

Hi OMs/OPs and NG readers,

I'm looking for a pinout and/or data sheet of a old Motorola ic named

UAA2001

should be a pll synthesizer for TV tuners.

Anyone who can help my on this?

Many thanks in advance.

Markus
DL8MBY

PS.: I had already searched for days without success in the web.

# 551. Re: Grid circuits for RF power amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-21 22:25:20 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <5ridnaE5x6aZiZDVnZ2dnUVZ8tGqnZ2d@pipex.net>
Source record: 5288

Tim Wescott wrote:
> If you want to minimize the drive power you're going to have to use a
> tuned grid circuit; having such a power-efficient design is going to make
> your circuit susceptible to oscillation, as it'll take less than 1% of
> the output power to come back in to the grid circuit and cause problems.
> So a 120 (or 170) milliwatt input implies both a tuned grid circuit and
> neutralization.
>
> If you want to go broad-band, you need some dissipative elements in the
> grid circuit to broaden the response. Something like a plain old
> resistor would do quite well. With resistive loading, your grid circuit
> will both be broader band _and_ your need for neutralization will be far
> less. I'd be tempted to think along the lines of a 1W QRP rig and
> resistor in the grid circuit that dissipates 800mW. I'll leave the
> calculations to you, but this will broaden your grid circuit response
> considerably, ease your bias network design problem, and reduce (or
> eliminate) the need for neutralization and/or obsessively high degrees of
> isolation in your circuit layout.
==========
Tim ,If I understand the above correctly you refer to a passive grid
circuit with for example a 200 or 300 or 600 Ohms non-inductive resistor
and a toroid type of auto-transformer .

With the exiter output impedance being 50 Ohms , the auto-transformer
impedance step-up would have to be as follows ;
For the 200 Ohms resistor 1: 4
For the 300 Ohms resistor 1: 6
for the 600 Ohms resistor 1: 12

The resistor to be chosen would be able to swing the grid voltage
sufficiently to drive the tube ,which would have a set negative grid
voltage for whatever Class the tube will operate eg class C , AB or even
A ,all that for the exiter power available.

Such a passive grid scheme can be found on the web site of AG6K.

Frank GM0CSZ / KN6WH

# 552. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 01:38:43 UTC
From: Jim <nospam@nospam.com>
Message-ID: <35gq049mu3h7kot2lv86vkp3j2dbjla533@4ax.com>
Source record: 5289

FYI: THe 2E26 is a good small rugged tube. It was used as final in
the Spy Sets used by the clandestine community in the cold war days.
I have one of the sets, and it will literally tune into anything and
work off almost any power source. It is crystal controlled, but I
don't have any schematic.

One of the older ARRL workbooks will have lots of circuits for the
2E26 tube, circa 1950-1960.

On Sat, 19 Apr 2008 11:36:00 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of break-in
>operation) that employs a 2E26 tube in the PA. With ICAS operation I can get
>27 watts of RF out with a driving power of 0.17 wattts (according to my RCA
>sheet). I want most of my "design" efforts and interest to centre around
>the PA stage. I think I could cope with that at least.
>
>Can anyone please point me to a suitable solid-state exciter circuit? I want
>the Tx to cover any HF band (I'll use plug-in coils). TIA.
>
>
>
>

# 553. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 04:00:11 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0804212354480.8678@darkstar.example.org>
Source record: 5290

On Mon, 21 Apr 2008, markus wolfgart wrote:

> Hi OMs/OPs and NG readers,
>
> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>
> UAA2001
>
> should be a pll synthesizer for TV tuners.
>
I checked the two Motorola databooks I have, one from about 1978 and
the other from 1990, and the IC doesn't show up there.

I looked because I had thought some odd-numbered devices for tv
showed up, but nothing. I checked my 30 year old National
databook too, but nothing there either.

Michael VE2BVW

# 554. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 05:29:23 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <zMWdnWOSbvcy6pDVnZ2dnUVZ_saknZ2d@cpinternet>
Source record: 5291

Michael Black wrote:

> On Mon, 21 Apr 2008, markus wolfgart wrote:
>
>> Hi OMs/OPs and NG readers,
>>
>> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>>
>> UAA2001

<snip>

Try: http://www.datasheetarchive.com/pdf/3511822.pdf

Michael

# 555. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 05:47:44 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <avSdnVW8fNRm5pDVnZ2dnUVZ_qTinZ2d@cpinternet>
Source record: 5292

msg wrote:

> Michael Black wrote:
>
>> On Mon, 21 Apr 2008, markus wolfgart wrote:
>>
>>> Hi OMs/OPs and NG readers,
>>>
>>> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>>>
>>> UAA2001
>
>
> <snip>
>
> Try: http://www.datasheetarchive.com/pdf/3511822.pdf

Sorry, this turned out to be only a bit of an old Euro Master
Selection Guide. However, there are more clues to be found
in the datasheet for the UAA2022 (which wasn't easy to find
online either):

http://www.uploadarchief.net/files/download/uaa2022.pdf

(UAA2000/2001 is mentioned in the description)

Michael

## 556. Re: Grid circuits for RF power amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 08:58:37 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <675nm6F2j29o7U1@mid.individual.net>
Source record: 5293

"Highland Ham" <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote in message
news:5ridnaE5x6aZiZDVnZ2dnUVZ8tGqnZ2d@pipex.net...
> Tim Wescott wrote:
> > If you want to minimize the drive power you're going to have to use a
>> tuned grid circuit; having such a power-efficient design is going to make
>> your circuit susceptible to oscillation, as it'll take less than 1% of
>> the output power to come back in to the grid circuit and cause problems.
>> So a 120 (or 170) milliwatt input implies both a tuned grid circuit and
>> neutralization.
>>
>> If you want to go broad-band, you need some dissipative elements in the
>> grid circuit to broaden the response. Something like a plain old
>> resistor would do quite well. With resistive loading, your grid circuit
>> will both be broader band _and_ your need for neutralization will be far
>> less. I'd be tempted to think along the lines of a 1W QRP rig and
>> resistor in the grid circuit that dissipates 800mW. I'll leave the
>> calculations to you, but this will broaden your grid circuit response
>> considerably, ease your bias network design problem, and reduce (or
>> eliminate) the need for neutralization and/or obsessively high degrees of
>> isolation in your circuit layout.
> ========================
> Tim ,If I understand the above correctly you refer to a passive grid
> circuit with for example a 200 or 300 or 600 Ohms non-inductive resistor
> and a toroid type of auto-transformer .
>
> With the exiter output impedance being 50 Ohms , the auto-transformer
> impedance step-up would have to be as follows ;
> For the 200 Ohms resistor 1: 4
> For the 300 Ohms resistor 1: 6
> for the 600 Ohms resistor 1: 12
>
> The resistor to be chosen would be able to swing the grid voltage
> sufficiently to drive the tube ,which would have a set negative grid
> voltage for whatever Class the tube will operate eg class C , AB or even A
> ,all that for the exiter power available.
>
> Such a passive grid scheme can be found on the web site of AG6K.
>
>
> Frank GM0CSZ / KN6WH

I see that EI9GC uses passive grid in his PA.

http://homepage.eircom.net/~ei9gq/amp.html

Also, I just discover the RF Amplifiers group at Yahoo. Will join that.

# 557. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 13:41:39 UTC
From: markus wolfgart <markus.wolfgart@dlr.de>
Message-ID: <67688jF2n7a29U1@mid.dfncis.de>
Source record: 5294

Tahnks Michael for your efford, but that was the only doc
I could find bofor on this ic while looking in the web.
Unfortunatelly without to much information in it about the
mentioned chip.

vy 73

Markus
DL8MVY

msg schrieb:
> msg wrote:
>
>> Michael Black wrote:
>>
>>> On Mon, 21 Apr 2008, markus wolfgart wrote:
>>>
>>>> Hi OMs/OPs and NG readers,
>>>>
>>>> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>>>>
>>>> UAA2001
>>
>>
>> <snip>
>>
>> Try: http://www.datasheetarchive.com/pdf/3511822.pdf
>
> Sorry, this turned out to be only a bit of an old Euro Master
> Selection Guide. However, there are more clues to be found
> in the datasheet for the UAA2022 (which wasn't easy to find
> online either):
>
> http://www.uploadarchief.net/files/download/uaa2022.pdf
>
> (UAA2000/2001 is mentioned in the description)
>
> Michael

## 558. Sabin Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 13:52:40 UTC
From: "William E. Sabin" <w.sabin@mchsi.com>
Message-ID: <H4mPj.77715$TT4.4950@attbi_s22>
Source record: 5295

An improved brief description of my new book Discrete-Signal Analysis and Design is on QRZ.COM (W0IYH)

Bill W0IYH

# 559. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 14:53:51 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <1cqdnfhjfO9nZpDVnZ2dnUVZ_uSdnZ2d@cpinternet>
Source record: 5296

markus wolfgart wrote:

>
> Tahnks Michael for your efford,
<snip>

I imagine that you have considered it, but it is still worth mentioning: The device seems to have been popular in about 1986; peruse Sams Photofact TV folders from that period for TVs that have a 7-segment channel display and see if they use the UAA2001/UAA2022 combination -- the schematic should provide connection and pinout information and some clues on using the device.

Michael

# 560. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 19:53:36 UTC
From: markus wolfgart <markus.wolfgart@dlr.de>
Message-ID: <676u20F2naemiU1@mid.dfncis.de>
Source record: 5297

Hi Michael,

I'm sorry for causing additional effort in searching
for the pin out, but I had found some of these ic's
on a jumble sale and would like to play around with
pll syntheses on a rainy weekend if the ic is suitable
for this purpose.

Many thanks in advance for your kind help.

vy73

Markus
DL8MBY

msg schrieb:
> markus wolfgart wrote:
>
>>
>> Tahnks Michael for your efford,
> <snip>
>
> I imagine that you have considered it, but it is still worth
> mentioning: The device seems to have been popular in about
> 1986; peruse Sams Photofact TV folders from that period for
> TVs that have a 7-segment channel display and see if they
> use the UAA2001/UAA2022 combination -- the schematic should
> provide connection and pinout information and some clues
> on using the device.
>
> Michael

# 561. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 19:55:22 UTC
From: Clint Sharp <clint@clintsmc.demon.co.uk>
Message-ID: <R7h6TYEqKkDIFwCW@clintsmc.demon.co.uk>
Source record: 5298

In message <674f6kF2mnuvtU1@mid.dfncis.de>, markus wolfgart
<markus.wolfgart@dlr.de> writes
>Hi OMs/OPs and NG readers,
>
>I'm looking for a pinout and/or data sheet of a old Motorola ic named
>
>UAA2001
Is that really a Moto device? Sounds more like a TFK (telefunken) or
Philips device to me. Of course I could be wrong..
>
>should be a pll synthesizer for TV tuners.
>
>Anyone who can help my on this?
>
>
>Many thanks in advance.
>
>Markus
>DL8MBY
>
>PS.: I had already searched for days without success in the web.
>

--
Clint Sharp

# 562. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-22 22:15:27 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <LJCdnZ4C7tnn_pPVnZ2dnUVZ_s_inZ2d@cpinternet>
Source record: 5299

Clint Sharp wrote:

<snip>
>> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>>
>> UAA2001
>
> Is that really a Moto device? Sounds more like a TFK (telefunken) or
> Philips device to me. Of course I could be wrong..

Check the first URL that I posted in reply to the O.P.; you will see
that this device is included in a 1986 Motorola Euro Master Selection
Guide.

Michael

# 563. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 06:57:07 UTC
From: Clint Sharp <clint@clintsmc.demon.co.uk>
Message-ID: <8j7x1aBD3tDIFw2h@clintsmc.demon.co.uk>
Source record: 5157

In message <LJCdnZ4C7tnn_pPVnZ2dnUVZ_s_inZ2d@cpinternet>, msg
<msg@_cybertheque.org_> writes
>Check the first URL that I posted in reply to the O.P.; you will see
>that this device is included in a 1986 Motorola Euro Master Selection
>Guide.
>
>Michael
You're right.. Hmm, Very old device though, and I'm trying to think
where I've seen them, could be in old Grundig or Philips television
tuners, might be worth searching around for some old television
schematics for the OP.
--
Clint Sharp

# 564. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 12:47:40 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <a6968f35-ba97-48a5-b67d-caa0b29362a0@8g2000hse.googlegroups.com>
Source record: 5300

On Apr 21, 5:27 pm, markus wolfgart <markus.wolfg...@dlr.de> wrote:
> Hi OMs/OPs and NG readers,
>
> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>
> UAA2001
>
> should be a pll synthesizer for TV tuners.

I always thought that was a Toshiba part.

80's era TV and VCR tuners are most interesting, IMHO, used as the tin-can modules. If the TV is still functional you can usually figure out the header connector functions with a voltmeter or even a logic probe - no need to dink around with pinouts.

Do modern TV's still have the tin-can tuner modules, or is it more highly integrated these days? Of course a modern TV isn't an analog TV anymore either...geeze, it's been at least a decade since I tore into broken TV's and VCR's for parts, I gotta start doing it again! If we're lucky there will be a huge flood of older analog TV's for scavenging soon.

Tim.

# 565. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 12:57:32 UTC
From: markus wolfgart <markus.wolfgart@dlr.de>
Message-ID: <678q1tF2nmpu3U1@mid.dfncis.de>
Source record: 5151

Hi Michael,
hi Clint,

honestly speaking, I'm not quite sure if this part is really from
Motorola, but it is mentioned in a "consumer and automotive application
note" from Motorola and many other well known mot. ic's are listed in
this note like the famous MC1350 if amp.

Markus
DL8MBY

msg schrieb:
> Clint Sharp wrote:
>
> <snip>
>>> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>>>
>>> UAA2001
>>
>> Is that really a Moto device? Sounds more like a TFK (telefunken) or
>> Philips device to me. Of course I could be wrong..
>
> Check the first URL that I posted in reply to the O.P.; you will see
> that this device is included in a 1986 Motorola Euro Master Selection
> Guide.
>
> Michael

## 566. May QST... winner of $50 homebrew SSB transceiver challenge

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 13:06:44 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <9b7f0707-f476-4044-88d2-49671c497c82@m73g2000hsh.googlegroups.com>
Source record: 5152

The May 2008 QST has WA2EUJ's winning entry for the ARRL Homebrew challenge - the TAK-40 is a homebrew SSB transceiver made out of $49.50 in parts.

I am truly fascinated by this gadget. I ordered the parts (alas, inflation from entry time until now has driven the total bill up to closer to $60 these days... but some stuff from the junkbox brings it down again for me. And that's still cheaper than a new copy of the ARRL handbook!) and hope to build it in the next few weeks.

Even though it won in the "PC-supported" category, it does not require a PC to use it at all, just to program during construction the PIC microcontroller which does all the T/R switching as well as VFO and BFO and frequency counting magic. Get someone to program the PIC for you and you won't have to use a PC at all.

Some (including me) had previously postulated that the PC-supported entries would be closer to a software-defined radio, with a low IF and a lot of digital processing done via a PC's sound card and software. I am actually reassured a bit that this is not what the winner did... but wonder what software-defined entries were submitted. Maybe there were some, but in terms of performance WA2EUJ's seems to have beat them.

The WA2EUJ entry uses a PIC for T/R switching and even drives DAC's for VFO and BFO tuning (it's necessary to shift these for modes, T/R on CW, etc.) with frequency counting via the PIC and display on a LCD, but the only use for a PC is to program the PIC.

I think KD1JV's entry, in the non-PC-supported category, will be interesting as well. I think it gets published this month, but on KD1JV's website he already has construction details. His PTO looks pretty nifty!

Tim.

# 567. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 13:07:28 UTC
From: markus wolfgart <markus.wolfgart@dlr.de>
Message-ID: <678qkgF2o1iuiU1@mid.dfncis.de>
Source record: 5153

Hi Tim,

I have no possibility to find out the pinout from a tuner as I have just
a hand full of this mysterious ic's without a documentation on them.

So at least I will have to blow some of them to find out the pin out
with a bit of luck if it is not a I2C device.

Markus
BL8MBY

Tim Shoppa schrieb:
> On Apr 21, 5:27 pm, markus wolfgart <markus.wolfg...@dlr.de> wrote:
>> Hi OMs/OPs and NG readers,
>>
>> I'm looking for a pinout and/or data sheet of a old Motorola ic named
>>
>> UAA2001
>>
>> should be a pll synthesizer for TV tuners.
>
> I always thought that was a Toshiba part.
>
> 80's era TV and VCR tuners are most interesting, IMHO, used as the tin-
> can modules. If the TV is still functional you can usually figure out
> the header connector functions with a voltmeter or even a logic probe
> - no need to dink around with pinouts.
>
> Do modern TV's still have the tin-can tuner modules, or is it more
> highly integrated these days? Of course a modern TV isn't an analog TV
> anymore either...geeze, it's been at least a decade since I tore into
> broken TV's and VCR's for parts, I gotta start doing it again! If
> we're lucky there will be a huge flood of older analog TV's for
> scavenging soon.
>
> Tim.

## 568. 4CX1500B

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 14:31:41 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <hLHPj.79171$TT4.13702@attbi_s22>
Source record: 5154

Would some kind soul that actually knows/uses one of these, please identify the filament ring and the filament/cathode ring.

MNI Tnx

W4ZCB

# 569. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 16:02:13 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <e92284d6-1c49-4747-9048-f997d99e2cd1@34g2000hsf.googlegroups.com>
Source record: 5155

On Apr 23, 9:07 am, markus wolfgart <markus.wolfg...@dlr.de> wrote:
> Hi Tim,
>
> I have no possibility to find out the pinout from a tuner as I have just
> a hand full of this mysterious ic's without a documentation on them.
>
> So at least I will have to blow some of them to find out the pin out
> with a bit of luck if it is not a I2C device.

Oh, no, predates microcontrollers in TV's for the most part (not by a lot but at least a little). It probably worked with another chip that did LED display of channel number and handled pushbuttons for up/down.

The next generation did on-screen display of channel number, that's where I2C started showing up in at least some tuner/TV's.

Tim.

## 570. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 17:57:53 UTC
From: N2EY@aol.com
Message-ID: <e3b4c257-aed5-4cc4-b34f-f71519061411@e53g2000hsa.googlegroups.com>
Source record: 5156

On Mar 25, 1:41 am, Michael Black <et...@ncf.ca> wrote:
> On Mon, 24 Mar 2008, Tim Shoppa wrote:

> QST for May 1965 has the "Miser's Dream" that was a pretty advanced
> receiver for the time, including a 7360 mixer and an HF IF filter (though
> a second conversion to 455KHz for specific design reasons).

The article is called "Some Thoughts on Home Receiver Design". The
second
conversion to 455 kc. was to avoid having the BFO on the lots-of-gain
IF, and to
permit the use of a crystal controlled BFO, yet have it be adjustable
by moving
the 2215-to-455 oscillator freq.

The first IF is 2215 kc. If you can find a junked Sierra 126B
selective voltmeter,
it has nearly-identical filters inside. Some other models of Sierra
selective voltmeter
may have them too.

> I've
> always considered that the vector for the 7360 in hobby receiver
> mixers, though if I dug out the article, I'm sure it explicitly
> referenced the Squires article.

The Squires article was in Sept. 1963 QST.

>  One feature of the receiver is
> a q-multiplier at the signal frequency, to improve front end
> selectivity given there was no RF amplifier.  I've always wondered
> how necessary that q-multiplier was, given later receivers with
> high IFs got by fine with limited front end selectivity (I always
> wondered if the notion of no RF amplifier was so radical that
> they felt a need for the q-multiplier).

It was necessary on the higher bands. The IF was only 2215 kc., and on
15 meters the image rejection wasn't too good with just a single tuned
circuit.
The quick solution was an RF Q multiplier. But it seems to me to be an
add-on;
what it does is to boost the desired signal by increasing the
effective Q, rather
than rejecting the unwanted by adding more poles.

IMHO the better solution would be a double-tuned input circuit.

> There was a tube receiver in QST about February of 1973 (or was
> it '72?), that had to be one of the last described there.  It went
> for super strong signal handling, including a 7360 mixer and some
> sort of power tube as the RF stage.

"An Experimental Receiver For 75 Meter DX Work", by W1KLK, February
1972.
Uses a 7044 computer duotriode as a grounded-grid RF amp, followed by
a 7360 mixer.
There are no less than four tuned circuits before the mixer, and you
have to retune the
preselector often. Not for idle bandscanning; this RX is for digging
out the weak ones.

The 6AR8 is reportedly microphonic, and other types are preferable.
7360 was considered
a transmitting tube, which is why you find it in the Transmitting Tube
manual, and why
almost nobody but RCA made them.

Alternatives are the 6JH8 and 6ME8, which are less expensive and more
common. They were
used in TV sets. At least one ham rig maker (Swan) changed from using
the 7360 as a
balanced modulator to the 6JH8.

The Southgate Type 7 receiver section uses a 7360 mixer (google my
call to see).

73 de Jim, N2EY

# 571. Re: 4CX1500B

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 20:49:13 UTC
From: K4ERG <k4erg@arrl.net>
Message-ID: <aiNPj.45867$r76.10414@bignews8.bellsouth.net>
Source record: 5158

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:hLHPj.79171$TT4.13702@attbi_s22...
> Would some kind soul that actually knows/uses one of these, please
> identify the filament ring and the filament/cathode ring.
>
> MNI Tnx
>
> W4ZCB
>

Bottom - - Heater
Next up - - Heater and cathode
Next up - - Grid
Next up - - Screen

# 572. Re: UAA2001 PLL SYNTHESIZER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 22:11:12 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <Na6dnZcCd9JkLpLVnZ2dnUVZ_jCdnZ2d@cpinternet>
Source record: 5159

Tim Shoppa wrote:

> On Apr 23, 9:07 am, markus wolfgart <markus.wolfg...@dlr.de> wrote:
>
>>Hi Tim,
>>
>>I have no possibility to find out the pinout from a tuner as I have just
>>a hand full of this mysterious ic's without a documentation on them.
>>
>>So at least I will have to blow some of them to find out the pin out
>>with a bit of luck if it is not a I2C device.
>
>
> Oh, no, predates microcontrollers in TV's for the most part (not by a
> lot but at least a little). It probably worked with another chip that
> did LED display of channel number and handled pushbuttons for up/down.
>

Yes, Tim; my second reply to the O.P. referred to the UAA2022, which is
the LED display driver and controller you suspected ;)

Michael

## 573. Re: 4CX1500B

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-23 22:23:09 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <hFOPj.133443$yE1.24264@attbi_s21>
Source record: 5160

"K4ERG" <k4erg@arrl.net> wrote in message
news:aiNPj.45867$r76.10414@bignews8.bellsouth.net...
>
> Bottom - - Heater
> Next up - - Heater and cathode
> Next up - - Grid
> Next up - - Screen
Ah! Bless you "Erg". The ONLY thing I could find was as you state for a very old (45 years) copy of a 4CX1000 data sheet. Even Google was befuddled.

It makes sense to me (And to the builder of the not quite finished amplifier that I inherited) that Eimac would put the lowest potential terminal at the bottom. And then proceed to the screen. Obviously, they had something else in mind.

Wired with the bottom ring to ground, making the cathode 6 Volts AC above ground gives rated power out, but about 200 Watts of it was 60 Hz hum. The task of making the change is pretty daunting. Not impossible, just daunting, and I wanted to make certain that this was where my hum was coming from (31 Volts of bias, ~25 of DC and 6 of AC) before I removed half the amplifier to get the sub-chassis out.

Tnx again.
W4ZCB

## 574. Transmitter Circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-24 17:08:19 UTC
From: Theo <theodore.twyler@ntlworld.com>
Message-ID: <783Qj.59291$h65.56659@newsfe2-gui.ntli.net>
Source record: 5161

I am trying to locate the article for a simple 2 transistor topband AM phone transmitter
from many years ago that I am sure appeared in "Practical Wireless" sometime between 1958 and 1965.
If memory serves me correctly, it used two germanium transistors, OC71 and OC44.
The OC71 was configured as a microphone amp/modulator and the OC44 as a Hartley oscillator.
The oscillator coil was wound on a short piece of ferrite rod.
I wonder if anyone can help in any way?

## 575. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-25 10:09:38 UTC
From: CP <someone@nospam.com>
Message-ID: <jPOdnbw9A91xMIzVnZ2dnUVZ_qOknZ2d@comcast.com>
Source record: 5162

If the 2E26 is operating class C, I think you'll have a problem generating enough voltage swing at the 2E26 grid unless you use tuned circuits to step up the SS drive circuit's output. I have kinda similar set up, DDS VFO drives SS broadband chain drives (1:4 stepup here) 6CL6 (tuned circuit here) drives 6146.
Bob
kb8tl

"Richard" <nearlynews_email@ntlworld.com> wrote in message news:66u08mF1soskqU1@mid.individual.net...
>I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of
>break-in
> operation) that employs a 2E26 tube in the PA. With ICAS operation I can
> get
> 27 watts of RF out with a driving power of 0.17 wattts (according to my
> RCA
> sheet). I want most of my "design" efforts and interest to centre around
> the PA stage. I think I could cope with that at least.
>
> Can anyone please point me to a suitable solid-state exciter circuit? I
> want
> the Tx to cover any HF band (I'll use plug-in coils). TIA.
>
>
>
>
>

## 576. Millivac Probe Help, Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-25 13:30:47 UTC
From: Sbc News <Andy@Hardy.com>
Message-ID: <b2lQj.570$1b7.336@newssvr13.news.prodigy.net>
Source record: 5163

I have a Millivac RF voltmeter, MV-723B, and I am looking for a probe,
and/or a schematic of the probe and meter.
Your help would be appreciated. w9nm at sbcglobal dot net

Thanks,
Emil
W9NM

# 577. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-25 16:05:38 UTC
From: Mike Silva <snarflemike@yahoo.com>
Message-ID: <7e7f3ce2-4804-4e7f-a982-ef2dcfd17984@26g2000hsk.googlegroups.com>
Source record: 5164

On Apr 25, 6:09 am, "CP" <some...@nospam.com> wrote:
> If the 2E26 is operating class C, I think you'll have a problem generating
> enough voltage swing at the 2E26 grid unless you use tuned circuits to step
> up the SS drive circuit's output. I have kinda similar set up, DDS VFO
> drives SS broadband chain drives (1:4 stepup here) 6CL6 (tuned circuit here)
> drives 6146.
> Bob
> kb8tl

Right. The 2E26 needs about 80-120V pk-pk on the grid (depending on
plate voltage and power output), at a couple hundred mW.

Mike

## 578. Re: Grid circuits for RF power amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-25 18:18:42 UTC
From: Skipp <spamsomeoneelseplease@yahoo.com>
Message-ID: <fut7a2$fh4$1@skeeter.ucdavis.edu>
Source record: 5165

Yep, come on over to the yahoo rf amplifiers group and we'll try to
help you out...

http://groups.yahoo.com/group/rfamplifiers/

cheers,
s.

: Richard <nearlynews_email@ntlworld.com> wrote:
: I see that EI9GC uses passive grid in his PA.

: http://homepage.eircom.net/~ei9gq/amp.html

: Also, I just discover the RF Amplifiers group at Yahoo. Will join that.

: http://groups.yahoo.com/group/rfamplifiers/

## 579. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-25 22:42:14 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <67f52kF2p3e4hU1@mid.individual.net>
Source record: 5166

Aaah, I see. If I try to use passive grid input circuit how am I going to get the required voltage swing on the grid which could be in the order of 80-120V pk-pk? Noted thanks.

"CP" <someone@nospam.com> wrote in message news:jPOdnbw9A91xMIzVnZ2dnUVZ_qOknZ2d@comcast.com...
> If the 2E26 is operating class C, I think you'll have a problem generating
> enough voltage swing at the 2E26 grid unless you use tuned circuits to
> step up the SS drive circuit's output. I have kinda similar set up, DDS
> VFO drives SS broadband chain drives (1:4 stepup here) 6CL6 (tuned circuit
> here) drives 6146.
> Bob
> kb8tl
>
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:66u08mF1soskqU1@mid.individual.net...
>>I want to homebrew a crystal controlled (or VXO) CW Tx, (capable of
>>break-in
>> operation) that employs a 2E26 tube in the PA. With ICAS operation I can
>> get
>> 27 watts of RF out with a driving power of 0.17 wattts (according to my
>> RCA
>> sheet). I want most of my "design" efforts and interest to centre around
>> the PA stage. I think I could cope with that at least.
>>
>> Can anyone please point me to a suitable solid-state exciter circuit? I
>> want
>> the Tx to cover any HF band (I'll use plug-in coils). TIA.
>>
>>
>>
>>
>>
>
>

# 580. Re: Can anyone point me to an appropriate solid-state exciter circuit for my 2E26?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-26 19:50:25 UTC
From: Mike Silva <snarflemike@yahoo.com>
Message-ID: <813ec1c2-fb4a-43f0-ac03-47e705fa6b9a@k13g2000hse.googlegroups.com>
Source record: 5167

On Apr 25, 6:42 pm, "Richard" <nearlynews_em...@ntlworld.com> wrote:
> Aaah, I see. If I try to use passive grid input circuit how am I going to
> get the required voltage swing on the grid which could be in the order of
> 80-120V pk-pk? Noted thanks.

I imagine that's why the hybrid rigs of the past that used tube finals also used a tube driver like a 6CL6 or 12BY7. Just easier to get the required voltage with a tube, and they had the HV anyway for the finals. You can certainly get on the air with a two-tube rig - all the handbooks of the era had them. If you want to rethink a tube oscillator/driver here are some good tube choices

6AG7
6CL6
5763
6AH6
6AC7
12BY7 (expensive!)

You should also consider joining the glowbugs email list, where ham radio tube homebrew is king. Google should pull up the info to sign up. They will definitely get you on the air.

Mike

## 581. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-27 14:10:49 UTC
From: Dino Papas <kl0s@cox.net>
Message-ID: <kl0s-874A9D.10104927042008@news.lga.highwinds-media.com>
Source record: 5168

And if you look at the larger booksellers online you can buy the book for a significantly lower price....at Barnes & Noble for instance if you're a member (and if you buy a lot of books/DVDs I don't know how you can afford not to be) the volume runs around $90 with free shipping. Looks like it's $90 on Amazon.com as well.

Haven't had a chance to take a look yet but from the TOC looks like a good read....have added to my "gonna buy' list.

Congrats Bill....

73 -- Dino KL0S/4

# 582. Re: New Sabin (W0IYH) Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-27 19:35:03 UTC
From: "William E. Sabin" <w.sabin@mchsi.com>
Message-ID: <Hz4Rj.85307$TT4.34240@attbi_s22>
Source record: 5169

Wherever you buy it and whatever you pay for it, be SURE ahead of time that it INCLUDES the Mathcad disk. That disk is very excellent and valuable, very far beyond the price that is being charged.

Bill W0IYH

"Dino Papas" <kl0s@cox.net> wrote in message news:kl0s-874A9D.10104927042008@news.lga.highwinds-media.com...
> And if you look at the larger booksellers online you can buy the book
> for a significantly lower price....at Barnes & Noble for instance if
> you're a member (and if you buy a lot of books/DVDs I don't know how you
> can afford not to be) the volume runs around $90 with free shipping.
> Looks like it's $90 on Amazon.com as well.
>
> Haven't had a chance to take a look yet but from the TOC looks like a
> good read....have added to my "gonna buy' list.
>
> Congrats Bill....
>
> 73 -- Dino KL0S/4

## 583. Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-27 20:47:05 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <YB5Rj.55753$Q52.26207@bignews9.bellsouth.net>
Source record: 5170

I have a project I would like to build, and this would be for me a first time PIC controller project.

I am looking for a PIC to do the following:

1. Address 17 parallel binary weighted bits (need at least 17 I/O's in addition to inputs from (2) below and outputs for LCD (3) below.
2. Have a keypad or rotary encoder to select combinations of the above bits.
3. An LCD display of a frequency generated by the PLL device attached to it per instructions below in (4).
4. Be able to enter a frequency such as 2300.6375 MHz, and do the math to subtract an IF frequency and divide the resultant frequency by some multiplier to address the parallel bits.

The PIC should be available with an evaluation board containing an LCD display a keypad or rotary encoder. I do not want to have to design a circuit board for a one time project.

For background, I have a Scientific Atlanta synthesizer that is designed to generate a frequency in the range of 100.2x to 110.7x MHz to phase lock a microwave brick oscillator used for a C band satellite up and downconvertor. The unit has an external BCD switch which is designed to display 3200.XX to 4200.XX MHz and I wish to re purpose it for a different frequency band.

Any recommendations?

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 584. Re: Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-28 00:22:04 UTC
From: sdeyoreo@hotmail.com
Message-ID: <116a149juv8jts080fhtvpbp9g4bpimcjq@4ax.com>
Source record: 5171

On Sun, 27 Apr 2008 16:47:05 -0400, RFI-EMI-GUY
<Rhyolite@NETTALLY.COM> wrote:

>
>I have a project I would like to build, and this would be for me a first
>time PIC controller project.
>
>I am looking for a PIC to do the following:
>
>1. Address 17 parallel binary weighted bits (need at least 17 I/O's in
>addition to inputs from (2) below and outputs for LCD (3) below.
>2. Have a keypad or rotary encoder to select combinations of the above bits.
>3. An LCD display of a frequency generated by the PLL device attached to
>it per instructions below in (4).
>4. Be able to enter a frequency such as 2300.6375 MHz, and do the math
>to subtract an IF frequency and divide the resultant frequency by some
>multiplier to address the parallel bits.
>
>The PIC should be available with an evaluation board containing an LCD
>display a keypad or rotary encoder. I do not want to have to design a
>circuit board for a one time project.
>
>For background, I have a Scientific Atlanta synthesizer that is designed
> to generate a frequency in the range of 100.2x to 110.7x MHz to phase
>lock a microwave brick oscillator used for a C band satellite up and
>downconvertor. The unit has an external BCD switch which is designed to
> display 3200.XX to 4200.XX MHz and I wish to re purpose it for a
>different frequency band.
>
>Any recommendations?
This PIC, PIC18F85J90, from Microchip should do it. Here's it's demo
board:
http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=1406&dDocName=en530
757

Here's the PIC:
http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=1335&dDocName=en026
342

MicroChip's IDE, MPLAB and compilier C18 are free from their site.

## 585. Re: Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-28 00:22:21 UTC
From: sdeyoreo@hotmail.com
Message-ID: <o56a14tblivqh7sre21vokp23co2t2cdvo@4ax.com>
Source record: 5172

On Sun, 27 Apr 2008 16:47:05 -0400, RFI-EMI-GUY
<Rhyolite@NETTALLY.COM> wrote:

>
>I have a project I would like to build, and this would be for me a first
>time PIC controller project.
>
>I am looking for a PIC to do the following:
>
>1. Address 17 parallel binary weighted bits (need at least 17 I/O's in
>addition to inputs from (2) below and outputs for LCD (3) below.
>2. Have a keypad or rotary encoder to select combinations of the above bits.
>3. An LCD display of a frequency generated by the PLL device attached to
>it per instructions below in (4).
>4. Be able to enter a frequency such as 2300.6375 MHz, and do the math
>to subtract an IF frequency and divide the resultant frequency by some
>multiplier to address the parallel bits.
>
>The PIC should be available with an evaluation board containing an LCD
>display a keypad or rotary encoder. I do not want to have to design a
>circuit board for a one time project.
>
>For background, I have a Scientific Atlanta synthesizer that is designed
> to generate a frequency in the range of 100.2x to 110.7x MHz to phase
>lock a microwave brick oscillator used for a C band satellite up and
>downconvertor. The unit has an external BCD switch which is designed to
> display 3200.XX to 4200.XX MHz and I wish to re purpose it for a
>different frequency band.
>
>Any recommendations?

## 586. Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-28 21:49:00 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <f6031172-ef5e-434e-a80f-25ff508a718a@l64g2000hse.googlegroups.com>
Source record: 5173

I have an interest in making RF filters with low distortion (for example, as preselection filters for receivers). I've found that very often I need to use air-core coils to get the low distortion I want, but it would be convenient if I could use powdered iron or ferrite core toroids to get higher Q at low frequencies without having to make the coils physically big. I've always assumed that powdered iron would give me the best results, but someone suggested I try low-permeability ferrite. I just did some experiments with that. I wound three toroids, all 0.37 inch OD cores; one is on mix 2 powdered iron, and the other two are on type 68 and type 67 ferrite. I put each coil in a simple 1MHz high pass filter: two 2.2nF caps in series, with the coil connected between them to ground. I tested for harmonic distortion with a 1MHz input, and for the 2.42MHz intermod product with 0.62MHz and 1.52Mhz inputs.

With about +16dBm coming out of the test filter at 1MHz, I measured second harmonic at about -95dBc for the T37-2, -90dBc for the FT37-67 and -57 for the FT37-68; the third was at -74dBc, -61dBc and -51dBc for the three coils in the same order.

The 2.42MHz intermod, with each tone at +18.5dBm out of the combiner, measured -71dBc, -58dBc and -38dBc for the coils, again in the same order.

My conclusion from this is that at least these two ferrites aren't going to help me in my search for a better low-distortion core material, but at the same time, it was interesting to note that the higher permeability -67 performed better by far than the lower permeability -68. It gives me some hope that if the ferrite materials guys went looking for a formulation that would be specifically as low-distortion as they could get, they might find something pretty good.

Before someone asks, no, I didn't run a T37-6 core coil along with these. I expect it would be a little better than the T37-2. And I've measured a few coils wound on (unknown formulation) powdered iron rods that show significantly lower distortion than those on toroid cores; but of course those have a large "air gap" and relatively high external field.

Cheers,
Tom

## 587. Re: Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-28 22:10:05 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <48164B3D.3070009@NETTALLY.COM>
Source record: 5174

sdeyoreo@hotmail.com wrote:
> On Sun, 27 Apr 2008 16:47:05 -0400, RFI-EMI-GUY
> <Rhyolite@NETTALLY.COM> wrote:
>
>> I have a project I would like to build, and this would be for me a first
>> time PIC controller project.
>>
>> I am looking for a PIC to do the following:
>>
>> 1. Address 17 parallel binary weighted bits (need at least 17 I/O's in
>> addition to inputs from (2) below and outputs for LCD (3) below.
>> 2. Have a keypad or rotary encoder to select combinations of the above bits.
>> 3. An LCD display of a frequency generated by the PLL device attached to
>> it per instructions below in (4).
>> 4. Be able to enter a frequency such as 2300.6375 MHz, and do the math
>> to subtract an IF frequency and divide the resultant frequency by some
>> multiplier to address the parallel bits.
>>
>> The PIC should be available with an evaluation board containing an LCD
>> display a keypad or rotary encoder. I do not want to have to design a
>> circuit board for a one time project.
>>
>> For background, I have a Scientific Atlanta synthesizer that is designed
>> to generate a frequency in the range of 100.2x to 110.7x MHz to phase
>> lock a microwave brick oscillator used for a C band satellite up and
>> downconvertor. The unit has an external BCD switch which is designed to
>> display 3200.XX to 4200.XX MHz and I wish to re purpose it for a
>> different frequency band.
>>
>> Any recommendations?
> This PIC, PIC18F85J90, from Microchip should do it. Here's it's demo
> board:
> http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=1406&dDocName=en5
30757
>
> Here's the PIC:
> http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=1335&dDocName=en0
26342
>
> MicroChip's IDE, MPLAB and compilier C18 are free from their site.

Thanks; It has a great looking display. No keypad or shaft encoder
though, I hope I can figure out what I need to interface those.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 588. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 00:25:46 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <eWtRj.87030$TT4.49621@attbi_s22>
Source record: 5175

Good info Tom, I'd like you to try -61 material, but I don't have anything
but T50 in that ferrite.

W4ZCB

>I have an interest in making RF filters with low distortion (for
> example, as preselection filters for receivers). I've found that very
> often I need to use air-core coils to get the low distortion I want,
> but it would be convenient if I could use powdered iron or ferrite
> core toroids to get higher Q at low frequencies without having to make
> the coils physically big.

## 589. Re: Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 00:58:25 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <LxuRj.3471$fn.2514@newsfe05.lga>
Source record: 5176

If size is not an issue, consider Microchip's Explorer 16 board. No encoder or keyboard, but the PIC has a zillion pins all brought out to card edge connectors. Microchip has very nice proto boards at a reasonable price you could use to connect the encoder, keyboard and synthesizer. The board includes a 2x16 display, as well as serial and USB interfaces. The Explorer 16 comes with a couple of PICs, both huge things with gobs of memory so you can do the programming in C and not be constantly looking over your shoulder. The "Student Edition" of the C30 compiler is free.

If money is no object, they have a thing they call the "Graphics PICtail" that plugs into the Explorer 16 which is a quarter-VGA with a touchscreen, and their graphics library implements a very credible encoder on the touch screen. They also have a numeric kepad on the touch screen, the screen is really too small for a full keyboard.

Since you seem to have decided on a PIC, I assume you have a ICD 2, PICkit 2 or something of that ilk for programming.

..

"RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message news:YB5Rj.55753$Q52.26207@bignews9.bellsouth.net...
>
> I have a project I would like to build, and this would be for me a first
> time PIC controller project.
>
> I am looking for a PIC to do the following:
>
> 1. Address 17 parallel binary weighted bits (need at least 17 I/O's in
> addition to inputs from (2) below and outputs for LCD (3) below.
> 2. Have a keypad or rotary encoder to select combinations of the above
> bits.
> 3. An LCD display of a frequency generated by the PLL device attached to
> it per instructions below in (4).
> 4. Be able to enter a frequency such as 2300.6375 MHz, and do the math
> to subtract an IF frequency and divide the resultant frequency by some
> multiplier to address the parallel bits.
>
> The PIC should be available with an evaluation board containing an LCD
> display a keypad or rotary encoder. I do not want to have to design a
> circuit board for a one time project.
>
> For background, I have a Scientific Atlanta synthesizer that is designed
> to generate a frequency in the range of 100.2x to 110.7x MHz to phase
> lock a microwave brick oscillator used for a C band satellite up and

> downconvertor. The unit has an external BCD switch which is designed to
> display 3200.XX to 4200.XX MHz and I wish to re purpose it for a
> different frequency band.
>
> Any recommendations?
>
>
>
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"
>
> "Treason doth never prosper: what's the reason?
> For if it prosper, none dare call it treason."
>
> "Follow The Money" ;-P

## 590. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 13:17:36 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <AdCdneO5_KZ0gorVnZ2dnUVZ_v-hnZ2d@cpinternet>
Source record: 5177

K7ITM wrote:

<snip>
> I wound three toroids, all 0.37 inch OD cores; one is on mix 2 powdered iron,
> and the other two are on type 68 and type 67 ferrite.

<snip>

How do you determine the formulation of the cores that you use (I am
presuming they are taken from the junk box...)?

Michael

# 591. Re: Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 13:24:33 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <et7e14dhgpg5oog1gdvskoik5pj7agcepa@4ax.com>
Source record: 5178

On Sun, 27 Apr 2008 16:47:05 -0400, RFI-EMI-GUY
<Rhyolite@NETTALLY.COM> wrote:

>
>I have a project I would like to build, and this would be for me a first
>time PIC controller project.
>
>I am looking for a PIC to do the following:
Take a look at the http://www.mikroe.com/en/tools/easypic5/
You will probably need to upgrade the CPU but you have a lot of work
in front of you before you get that far.

I use the Pascal compiler but I expect the C and Basic versions are
just as good. The on board programmer will handle the output from
MPLAB but not as convenient as the mikro compilers.

FWIW, that is an ambitious first project....

John Ferrell W8CCW
Beware of the dopeler effect (pronounced dope-ler).
That's where bad ideas seem good if they come at you
fast enough.

## 592. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 14:52:39 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <a2f76740-2fce-4011-bd0c-deecabc79c04@y21g2000hsf.googlegroups.com>
Source record: 5179

On Apr 29, 6:17 am, msg <msg@_cybertheque.org_> wrote:
> K7ITM wrote:
>
> <snip>
>
> > I wound three toroids, all 0.37 inch OD cores; one is on mix 2 powdered iron,
> > and the other two are on type 68 and type 67 ferrite.
>
> <snip>
>
> How do you determine the formulation of the cores that you use (I am
> presuming they are taken from the junk box...)?
>
> Michael

Well, I trust places like Amidon and Bytemark to supply what they say... The ferrite toroids were delivered last week from Bytemark. The powdered iron come mostly from old stock we have upstairs, some from ones I've ordered in the past from Amidon. (I have a different batch of cores in front of me right now that I'll try running the same test on. These cover a wider range of formulations, but all in (F)T50 size -- 'cept I couldn't find a T50-6, so I may look for a T37-6 or just run a T68-6A I do have.)

But you bring up a good topic. You can measure the dimensions of a core and figure its relative permeability from the inductance of a coil wound on it, and make a guess about the formulation from that, but short of doing more complicated tests, I don't know that you can really determine the formulation. Powdered iron toroids generally come with a color code paint job, but the ferrite toroids I've always gotten have nothing on them to tell you what they are. I've found that an "extra fine" tipped paint pen is a good way to put a marking on them. You could color-code them, but I just write what they are on them, such as "FT50-67". That's not so important if I keep them nicely sorted, but if I've wound a coil on one and then want to re-use it, it's a big help.

Cheers,
Tom

## 593. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 14:57:16 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <c05dd3c9-4ff3-494b-9bd1-dce779c39933@m73g2000hsh.googlegroups.com>
Source record: 5180

On Apr 28, 5:25 pm, "Harold E. Johnson" <W4...@mchsi.com> wrote:
> Good info Tom, I'd like you to try -61 material, but I don't have anything
> but T50 in that ferrite.

Hi Harold,

Well, I'm curious about -61 too. Turns out I have some FT50-61's (or so claimed by Baggy Bob...), and I have FT50-67, FT50-68, FT50-43, T50-1, T50-2, T50-3 and T50-7 to try for comparison. Unfortunately, we're out of T50-6, but maybe I can arrange a test on a different -6 against the same size -2, at least. Not sure if I'll get to the coil-winding and testing today, though.

Cheers,
Tom

## 594. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 15:58:21 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <xAHRj.87955$TT4.37991@attbi_s22>
Source record: 5181

> Hi Harold,
>
> Well, I'm curious about -61 too. Turns out I have some FT50-61's (or
> so claimed by Baggy Bob...), and I have FT50-67, FT50-68, FT50-43,
> T50-1, T50-2, T50-3 and T50-7 to try for comparison. Unfortunately,
> we're out of T50-6, but maybe I can arrange a test on a different -6
> against the same size -2, at least. Not sure if I'll get to the coil-
> winding and testing today, though.
>
> Cheers,
> Tom

Well, if you're going to put it off, I can send you a few T50-6's. Probably some -10 material too. BUT! I want your results when you get them! If you have them in a filter, would need to know the operating Q as well, but if just the toroid itself, wonderful to have.

W4ZCB

## 595. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 17:01:45 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <d4855c91-b7db-4565-a3c3-70ab9dc3dae1@a23g2000hsc.googlegroups.com>
Source record: 5182

On Apr 29, 8:58 am, "Harold E. Johnson" <W4...@mchsi.com> wrote:
> > Hi Harold,
>
> > Well, I'm curious about -61 too. Turns out I have some FT50-61's (or
> > so claimed by Baggy Bob...), and I have FT50-67, FT50-68, FT50-43,
> > T50-1, T50-2, T50-3 and T50-7 to try for comparison. Unfortunately,
> > we're out of T50-6, but maybe I can arrange a test on a different -6
> > against the same size -2, at least. Not sure if I'll get to the coil-
> > winding and testing today, though.
>
> > Cheers,
> > Tom
>
> Well, if you're going to put it off, I can send you a few T50-6's. Probably
> some -10 material too. BUT! I want your results when you get them! If you
> have them in a filter, would need to know the operating Q as well, but if
> just the toroid itself, wonderful to have.
>
> W4ZCB

Sure, I'll test 'em. I'll go ahead and test what I have, and add the
-6 in when I get them. I have the test setup documented well enough
that it will be easy to repeat the same tests later. Of course, the
test is always with some particular test setup. Even if I just
connected the toroid shunt across a 50 ohm line with source at one end
and analyzer at the other, it's still a particular environment, and
the results will be different if, for example, I add in my 1MHz
bandpass filter at the generator output (to kill generator harmonics)
and add my 1.5MHz HPF at the analyzer input (to kill the 1MHz so the
analyzer can be set to a lower range without contributing significant
distortion of its own). Each of those filters changes the source or
load impedance. I suppose I could have made diplexing type filters
that maintain a constant impedance vs frequency, but these guys are
big enough as it is, using high Q air core coils.

Anyway, the particular environment I chose for the coil test is in a
simple high-pass filter, nominally third order 0.1dB ripple Chebychev
with a 1MHz -3dB point: 2.2nF series, 5uH shunt (coil being tested),
2.2nF series. The distortion products I'm reporting are all 2MHz and
above, where the output capacitor passes things with very little
attenuation, and the excitation voltage across the inductor for a 1MHz
input is about 1.7dB higher than the 50-ohm source indicated output.
I suppose I could make the test more interesting by exciting a high
circulating current in the inductor, but it seems like if I excite
them in the test circuit to where distortion is clearly measurable,

the relative results be a good indication of relative performance in other circuits.

Cheers,
Tom

## 596. Toroid coil turns calc

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 17:12:46 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <305c15ee-5ada-42cc-984b-7b2b433a58ec@r66g2000hsg.googlegroups.com>
Source record: 5183

It's easy enough to find the number of turns required for a particular inductance on a known toroid core, but how do you know what size wire to use so that the turns will all fit on a single layer? That's this morning's geometry problem. I suppose you can find formulas, but a quick Google search didn't turn up anything useful for me this morning. What I worked out, that may be of some use to others, is:

Given D = inside diameter of the toroid core, and d = wire diameter, same units, and N = number of turns:

N = integer( pi/arcsin(d/(D-d)) (arcsine in radians...)

d(max) = D*sin(pi/N)/(1+sin(pi/N))

If you want to calculate in degrees, replace pi by 180. To allow for the inevitable little gaps and the wire not hugging the core ID closely, pick a wire with a diameter at least 10% less than d(max).

Also, if you use a smaller wire so the turns can be spread out or bunched together, you'll find that you can significantly adjust the coil's inductance that way, especially with low-mu toroids such as -2 and -6 powdered iron.

Cheers,
Tom

## 597. Re: Toroid coil turns calc

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 18:41:07 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <7ZJRj.142191$yE1.137769@attbi_s21>
Source record: 5184

"K7ITM" <k7itm@msn.com> wrote in message
news:305c15ee-5ada-42cc-984b-7b2b433a58ec@r66g2000hsg.googlegroups.com...
> It's easy enough to find the number of turns required for a particular
> inductance on a known toroid core, but how do you know what size wire
> to use so that the turns will all fit on a single layer? That's this
> morning's geometry problem. I suppose you can find formulas, but a
> quick Google search didn't turn up anything useful for me this
> morning. What I worked out, that may be of some use to others, is:

Nice, but the software "Mini ring-core calculator" (ver 1.2 free) will do
this for you, as will the Amidon manuals.

W4ZCB

## 598. Re: Toroid coil turns calc

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 20:11:16 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <58fd91e0-f278-4116-95ce-2a87a6621605@w7g2000hsa.googlegroups.com>
Source record: 5185

On Apr 29, 11:41 am, "Harold E. Johnson" <W4...@mchsi.com> wrote:
> "K7ITM" <k7...@msn.com> wrote in message
>
> news:305c15ee-5ada-42cc-984b-7b2b433a58ec@r66g2000hsg.googlegroups.com...
>
> > It's easy enough to find the number of turns required for a particular
> > inductance on a known toroid core, but how do you know what size wire
> > to use so that the turns will all fit on a single layer? That's this
> > morning's geometry problem. I suppose you can find formulas, but a
> > quick Google search didn't turn up anything useful for me this
> > morning. What I worked out, that may be of some use to others, is:
>
> Nice, but the software "Mini ring-core calculator" (ver 1.2 free) will do
> this for you, as will the Amidon manuals.
>
> W4ZCB

:-) I knew if I posted that, someone would tell me about a nice
little calculator. For others who may have trouble finding the mini
ring-core calculator, try: http://www.dl5swb.de/html/mini_ring_core_calculator.htm

I did find another somewhat similar calculator as a Java applet, but
it seems to get the wire size wrong. The one Harold mentions gets the
wire size right, and does a whole lot more. Great to have around if
you're winding toroids, and it also does simple solenoid coils and
inductance of straight wire. You can even select US units (AWG;
inches) or rest of the world units (metric). Nice that it also tells
you the length of wire you'll need to wind the coil. Includes a
resonance calc and more.

Thanks, Harold!

Cheers,
Tom

## 599. Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 21:55:12 UTC
From: amdx <amdx@knology.net>
Message-ID: <eb840$481794c7$450139f0$443@KNOLOGY.NET>
Source record: 5186
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I have an undercounter AM, FM radio. When I plug the power supply to my laptop
into an outlet in the same room, the FM signal gets very noisy. Upon further investigation, I found that just plugging the ac cord into an outlet and holding it near the laptop causes the noise. Also holding the laptop near the power cord of the radio causes the noise. Holding the laptop near the radio doesn't cause the noise.
So I think the laptop is generating noise that gets induced into the ac line.
I tried wrapping the radio cord about (ten turns) through a (junkbox) toroid without any help to the problem. The toroid is 3" in dia. It's probably an iron laminate core
(low frequency) so may not be right for filtering the ac line.
My next step is to go to Radio Shack and try to purchase some clamshell type
line filters.
Any ideas to eliminate this noise from the ac line?
Mike

## 600. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-29 22:27:29 UTC
From: Charles <charlesschuler@comcast.net>
Message-ID: <qvydnTTQBNdJPYrVnZ2dnUVZ_rmjnZ2d@comcast.com>
Source record: 5187
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"amdx" <amdx@knology.net> wrote in message
news:eb840$481794c7$450139f0$443@KNOLOGY.NET...
>I have an undercounter AM, FM radio. When I plug the power supply to my
>laptop
> into an outlet in the same room, the FM signal gets very noisy. Upon
> further investigation, I found that just plugging the ac cord into an
> outlet and holding it near the laptop causes the noise. Also holding the
> laptop near the power cord of the radio causes the noise. Holding the
> laptop near the radio doesn't cause the noise.
> So I think the laptop is generating noise that gets induced into the ac
> line.
> I tried wrapping the radio cord about (ten turns) through a (junkbox)
> toroid without any help to the problem. The toroid is 3" in dia. It's
> probably an iron laminate core
> (low frequency) so may not be right for filtering the ac line.
> My next step is to go to Radio Shack and try to purchase some clamshell
> type
> line filters.
> Any ideas to eliminate this noise from the ac line?
> Mike

Switch-mode power supplies are dirty ... lots of harmonic energy. The
interference is both radiated and sent back into the ac mains. A line
filter plus physical separation are the things to try.

## 601. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 00:08:20 UTC
From: Phil Allison <philallison@tpg.com.au>
Message-ID: <67prjeF2qap6tU1@mid.individual.net>
Source record: 5188
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Charles"

>
> Switch-mode power supplies are dirty ... lots of harmonic energy. The
> interference is both radiated and sent back into the ac mains.

** But they don't usually generate energy in the FM broadcast band ( i.e.
88 - 108 MHz) - that is more likely to be due to the CPU and associated
high speed circuits inside the PC.

..... Phil

# 602. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 00:43:44 UTC
From: Simon S Aysdie <gwhite@ti.com>
Message-ID: <d5b427a6-c8e4-4974-8ac9-8ad32205ad46@y38g2000hsy.googlegroups.com>
Source record: 5189
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Apr 29, 3:27 pm, "Charles" <charlesschu...@comcast.net> wrote:
> "amdx" <a...@knology.net> wrote in message
>
> news:eb840$481794c7$450139f0$443@KNOLOGY.NET...
>
>
>
>
>
> > >I have an undercounter AM, FM radio. When I plug the power supply to my
> > >laptop
> > > into an outlet in the same room, the FM signal gets very noisy. Upon
> > > further investigation, I found that just plugging the ac cord into an
> > > outlet and holding it near the laptop causes the noise. Also holding the
> > > laptop near the power cord of the radio causes the noise. Holding the
> > > laptop near the radio doesn't cause the noise.
> > > So I think the laptop is generating noise that gets induced into the ac
> > > line.
> > > I tried wrapping the radio cord about (ten turns) through a (junkbox)
> > > toroid without any help to the problem. The toroid is 3" in dia. It's
> > > probably an iron laminate core
> > > (low frequency) so may not be right for filtering the ac line.
> > >  My next step is to go to Radio Shack and try to purchase some clamshell
> > > type
> > > line filters.
> > >   Any ideas to eliminate this noise from the ac line?
> > >                                                        Mike
>
> Switch-mode power supplies are dirty ... lots of harmonic energy.  The
> interference is both radiated and sent back into the ac mains.  A line
> filter plus physical separation are the things to try.

Some clocks for digital devices are intentionally "spread spectrum"
since the digital stuff doesn't care. This helps pass FCC type
acceptance. Spread spectrum is FM noise.

I remember that IC company IMI used to make SS clocks for digital
stuff. I wonder what ever happened to them.

http://findarticles.com/p/articles/mi_m0EIN/is_1999_June_28/ai_55000638
http://www.eetindia.co.in/ART_8800487294_1800000_NT_7932edcb.HTM

# 603. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 01:23:42 UTC
From: mpm <mpmillard@aol.com>
Message-ID: <e155edd9-3b40-410f-acd8-929bfbea9252@w7g2000hsa.googlegroups.com>
Source record: 5190
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Apr 29, 5:55 pm, "amdx" <a...@knology.net> wrote:
> I have an undercounter AM, FM radio. When I plug the power supply to my
> laptop
> into an outlet in the same room, the FM signal gets very noisy. Upon further
> investigation, I found that just plugging the ac cord into an outlet and
> holding it near the laptop causes the noise. Also holding the laptop near
> the power cord of the radio causes the noise. Holding the laptop near the
> radio doesn't cause the noise.
> So I think the laptop is generating noise that gets induced into the ac
> line.
> I tried wrapping the radio cord about (ten turns) through a (junkbox)
> toroid without any help to the problem. The toroid is 3" in dia. It's
> probably an iron laminate core
> (low frequency) so may not be right for filtering the ac line.
> My next step is to go to Radio Shack and try to purchase some clamshell
> type
> line filters.
> Any ideas to eliminate this noise from the ac line?
> Mike

So, is it conducted noise or radiated noise?
The solutions are different.

If conduted, you can stop it with filters.
If radiated, you can stop it with shielding.
If both, you need both solutions.

It "sounds" to me like the radio is the problem, not the laptop, or
the laptop power supply.
Also, it's likely the weaker the FM station, the more noticable this
could be, depending of course on the type of detector the radio uses.
For AM, the noise could be horrendous!

An obvious thing to try: See if you have more than 1 branch circuit
available (in the kitchen, I presume??) If so, plug 'em in on
separate branches and see if this helps. (Note: Won't solve radiated
noise, but might help with conducted - and to me, that seems to be the
problem.)

Unless of course, I totally mis-read your post.

You can also do this test with an extention cord from another branch
circuit elsewhere in the dwelling. Even though the two branches have
at least some components in common, the separation can create enough
losses to lower the conducted emissions to acceptable levels.

Good luck.
-mpm

## 604. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 02:40:09 UTC
From: amdx <amdx@knology.net>
Message-ID: <24d4e$4817da47$18d6b40c$17841@KNOLOGY.NET>
Source record: 5191
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

```
"Phil Allison" <philallison@tpg.com.au> wrote in message
news:67prjeF2qap6tU1@mid.individual.net...
>
> "Charles"
>
>>
>> Switch-mode power supplies are dirty ... lots of harmonic energy. The
>> interference is both radiated and sent back into the ac mains.
>
>
> ** But they don't usually generate energy in the FM broadcast band ( i.e.
> 88 - 108 MHz) - that is more likely to be due to the CPU and associated
> high speed circuits inside the PC.
>
>
>
>
> ..... Phil
Good call Phil,
Maybe I didn't say it clearly, but just plugging the ac cord in and
holding
it near the laptop induces noise on the power line. ( ac cord only, no
switching power supply attached)
```

## 605. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 03:21:39 UTC
From: Phil Allison <philallison@tpg.com.au>
Message-ID: <67q6ttF2qdkn5U1@mid.individual.net>
Source record: 5192
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

```
"amdx"
> "Phil Allison"
>> "Charles"
>>>
>>> Switch-mode power supplies are dirty ... lots of harmonic energy. The
>>> interference is both radiated and sent back into the ac mains.
>>
>>
>> ** But they don't usually generate energy in the FM broadcast band (
>> i.e. 88 - 108 MHz) - that is more likely to be due to the CPU and
>> associated high speed circuits inside the PC.
>>
> Good call Phil,
> Maybe I didn't say it clearly, but just plugging the ac cord in and
> holding
> it near the laptop induces noise on the power line. ( ac cord only, no
> switching power supply attached)

** Validates my comment completely.

... Phil
```

## 606. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 05:10:14 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <4817FF36.4040506@NETTALLY.COM>
Source record: 5193
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

amdx wrote:
> I have an undercounter AM, FM radio. When I plug the power supply to my
> laptop
> into an outlet in the same room, the FM signal gets very noisy. Upon further
> investigation, I found that just plugging the ac cord into an outlet and
> holding it near the laptop causes the noise. Also holding the laptop near
> the power cord of the radio causes the noise. Holding the laptop near the
> radio doesn't cause the noise.
> So I think the laptop is generating noise that gets induced into the ac
> line.
> I tried wrapping the radio cord about (ten turns) through a (junkbox)
> toroid without any help to the problem. The toroid is 3" in dia. It's
> probably an iron laminate core
> (low frequency) so may not be right for filtering the ac line.
> My next step is to go to Radio Shack and try to purchase some clamshell
> type
> line filters.
> Any ideas to eliminate this noise from the ac line?
> Mike
>
>
Some of these undercounter AM/FM sets use the power line as an
"antenna". If you look closely you might find an antenna screw with a
metal clamp going around the power cord. If this is the case, you are
likely creating an extension of that antenna by plugging in one end of
the computer power cord and placing it near the laptop (which is
undeniably an noise source).

The fix is to get a separate FM antenna for the receiver and mount it
outside or at least some distance from your computer. Having a balanced
300 ohm type antenna might solve the problem.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 607. Re: Help, Laptop causes FM interference

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 08:51:35 UTC
From: Jan Panteltje <PNaonStpealmtje@yahoo.com>
Message-ID: <fv9bun$gh1$1@aioe.org>
Source record: 5194
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On a sunny day (Tue, 29 Apr 2008 16:55:12 -0500) it happened "amdx"
<amdx@knology.net> wrote in <eb840$481794c7$450139f0$443@KNOLOGY.NET>:

>I have an undercounter AM, FM radio. When I plug the power supply to my
>laptop
>into an outlet in the same room, the FM signal gets very noisy. Upon further
>investigation, I found that just plugging the ac cord into an outlet and
>holding it near the laptop causes the noise.

Looks like that radio is using the main lead [power cord] as FM antenna.

So if you decouple that mains lead noise will _not_ get better.

Just keep the 2 separate.
Or, if the radio has an external antenna connector, use that.

## 608. Rotator Pal

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 19:09:48 UTC
From: dd4ka <hsteffes@googlemail.com>
Message-ID: <4fb19599-e0d7-4891-8c69-c40e2592e743@8g2000hse.googlegroups.com>
Source record: 5195

Hi OM´s

I´m searchiung for an article of the Feb.QST Page 35 named Build your
rotor control.
If you culd mail me a copy of this article I would be very glad.
73
Hans
DD4KA

# 609. Re: Rotator Pal

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-04-30 21:21:00 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Yo5Sj.90007$TT4.46993@attbi_s22>
Source record: 5196

"dd4ka" <hsteffes@googlemail.com> wrote in message
news:4fb19599-e0d7-4891-8c69-c40e2592e743@8g2000hse.googlegroups.com...
Hi OM&#65533;s

I&#65533;m searchiung for an article of the Feb.QST Page 35 named Build your
rotor control.
If you culd mail me a copy of this article I would be very glad.
73
Hans
DD4KA

You either have the wrong magazine or the wrong year/month. It's not in Feb
2008 QST.

W4ZCB

## 610. 12BA6 -or- 12BE6 AM BC Low-Power Transmitter Help Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 03:56:16 UTC
From: Ty Unes <riverty@gmail.com>
Message-ID: <4819f67d$0$30234$4c368faf@roadrunner.com>
Source record: 5206

I have a handful of 12BA6 and 12BE6 tubes. I also could use an AM broadcast band transmitter for use around the house. I was wondering if these tubes could be used for a 1 or 2 tube transmitter in the BC band at 100mw or lower. Searching on the internet, I have found a few circuits all using different tubes but not these.

I love building and troubleshooting tube circuits but I lack the knowledge to "engineer" a circuit using these tubes. I wonder if someone would be kind enough to offer some advice on how I could get this done. Do you have a schematic of a circuit that would use these tubes? Is it even possible with these tubes? Is it a fairly easy task for someone with the knowledge to create a schematic for this?

Thanks for your time.

Ty Unes - OP, Ks.

## 611. Re: Rotator Pal

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 04:13:05 UTC
From: dd4ka <hsteffes@googlemail.com>
Message-ID: <bc4dcea1-74ad-4f9d-870a-91d865375160@y21g2000hsf.googlegroups.com>
Source record: 5197

On 30 Apr., 23:21, "Harold E. Johnson" <W4...@mchsi.com> wrote:
> "dd4ka" <hstef...@googlemail.com> wrote in message
>
> news:4fb19599-e0d7-4891-8c69-c40e2592e743@8g2000hse.googlegroups.com...
> Hi OM´s
>
> I´m searchiung for an article of the Feb.QST Page 35 named Build your
> rotor control.
> If you culd mail me a copy of this article I would be very glad.
> 73
> Hans
> DD4KA
>
> You either have the wrong magazine or the wrong year/month. It's not in Feb
> 2008 QST.
>
> W4ZCB

Hi
I´m sorry I forgot the year it was in feb QST 1996

73
Hans
DD4KA

## 612. Re: Rotator Pal

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 08:53:54 UTC
From: K4ERG <k4erg@arrl.net>
Message-ID: <2yfSj.25804$3v1.21194@bignews3.bellsouth.net>
Source record: 5198

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:Yo5Sj.90007$TT4.46993@attbi_s22...
>
> "dd4ka" <hsteffes@googlemail.com> wrote in message
> news:4fb19599-e0d7-4891-8c69-c40e2592e743@8g2000hse.googlegroups.com...
> Hi OM&#65533;s
>
> I&#65533;m searchiung for an article of the Feb.QST Page 35 named Build your
> rotor control.
> If you culd mail me a copy of this article I would be very glad.
> 73
> Hans
> DD4KA
>
> You either have the wrong magazine or the wrong year/month. It's not in
> Feb 2008 QST.
>
> W4ZCB
>

```
There are two hits for "Rotator Pal" in the QST index:

Issue Page Title Author
May 1996 QST 75 Feedback "Build the Rotator Pal" February 1996 QST
(Feedback)
Keywords: HOMEBREW ROTATOR CONSTRUCTION CONTROL
Feb 1996 QST 35 Build the Rotator Pal
Keywords: ROTATOR CONSTRUCTION CONTROL HOMEBREW Brock-Fisher, Tony,
K1KP
```

## 613. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 09:59:26 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.05.01.09.59.26.599935@localhost.localdomain>
Source record: 5199

Hi,

<snip>

> Alternatives are the 6JH8 and 6ME8, which are less expensive and more
> common.

I've done some experiments with the 6ME8 and it's horribly noisy compared
to the 7360.... or even a 6BE6 for that matter :-\

Cheers,

--
Gregg

## 614. Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 11:43:40 UTC
From: _ <jtayNOSPAMlor@hfDONTSENDMESPAMx.andara.com>
Message-ID: <1hyqimxunfulr$.rxi9kepwelq5.dlg@40tude.net>
Source record: 5200
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

...and if so what can I do about it?

I have a cobbled-together setup that almost works. I coach swimming, and I have a small video gadget that links to a Tivo and a TV via one of those video transmitters that you can get from ebay. I think it is a 1.2 gHz 50mw version.

The kids swim and then watch, and having the Tivo means there's a continuous flow of action. The problem is that the picture quality is bad. I'm only 20 metres away and there is a direct line-of-sight from transmitter to reciever - ocassionally with a body or two in the way; but even without, there is considerable jumping and colour distortion and generally a bad picture. If I stand still at just about any distance I can find a place that gets a good picture, but moving - even turning - makes it change.

The ceiling and the upper half of the inside walls of the pool are panelled with strips of aluminium sheathing - about 6 inches wide and 20 or more feet long. These are separated by about a 1-inch gap along the long edges, and mounted to a framework (which is mounted to concrete) with some sort of clip arrangement. This is a box about 220 feet long and 25 feet high.

What's the best guess for improving the picture? More power? Different frequency? Antenna mounting (I could wear a beanie with it sticking up from the top - that'd be cool)?

## 615. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 12:48:02 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <64efb19c-3a96-4a3d-b512-b12e7ecebb36@34g2000hsf.googlegroups.com>
Source record: 5201
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On 1 mayo, 13:43, _ <jtayNOSPAM...@hfDONTSENDMESPAMx.andara.com>
wrote:
> ...and if so what can I do about it?
>
> I have a cobbled-together setup that almost works. I coach swimming, and I
> have a small video gadget that links to a Tivo and a TV via one of those
> video transmitters that you can get from ebay. I think it is a 1.2 gHz
> 50mw version.
>
> The kids swim and then watch, and having the Tivo means there's a
> continuous flow of action. The problem is that the picture quality is bad.
> I'm only 20 metres away and there is a direct line-of-sight from
> transmitter to reciever - ocassionally with a body or two in the way; but
> even without, there is considerable jumping and colour distortion and
> generally a bad picture. If I stand still at just about any distance I can
> find a place that gets a good picture, but moving - even turning - makes it
> change.
>
> The ceiling and the upper half of the inside walls of the pool are panelled
> with strips of aluminium sheathing - about 6 inches wide and 20 or more
> feet long. These are separated by about a 1-inch gap along the long edges,
> and mounted to a framework (which is mounted to concrete) with some sort of
> clip arrangement. This is a box about 220 feet long and 25 feet high.
>
> What's the best guess for improving the picture? More power? Different
> frequency? Antenna mounting (I could wear a beanie with it sticking up
> from the top - that'd be cool)?

Hello,

When the multi path effect only affects received signal strength, you
can find many places with good reception and many with bad reception.

Best thing is to try it in an empty swimming hall. Your environment is
stable in that case. Move slowly < 1"/s and see what happens. At 1.2
GHz (WL about 10", 0.25m), the distance between bad reception and good
reception can be as low as some inches.

50mW is more then sufficient power for such an indoor application, so
assuming reasonable receive and transmit antenna, increasing power
will not help. You might switch to another channel or look to the
picture with transmitter off to check for interference from a similar
or other system sharing the same frequency.

In case of severe multi path effects bad and good reception may alternate within a yard (1m). When in the good places the reception is noise free, signal will have sufficient strength.

With severe multi path, where path via reflection can be many yards longer then the direct path, not only signal strength, but also received signal quality is affected (delay spread). In this case you will find few places with reasonable reception, even under good signal strength.

Given your equipment (probably Frequency Modulated system with one receive antenna), a directional receive antenna may give improvement. The disadvantage is that you need a second person to have the antenna aimed at the transmitter (in case of moving setup).

If this all is not possible and it must be wireless, you have to divert to multi antenna systems (space diversity) in combination with channel equalization or real wide band systems based on OFDM or other multi path resistant modulation scheme.

Hope this helps you a bit.

Wim
PA3DJS
www.tetech.nl
please remove abc from the address in case of a direct reply.

## 616. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 15:20:51 UTC
From: Mark <makolber@yahoo.com>
Message-ID: <39d59868-2848-4a13-87ac-910ec75c6bc7@y38g2000hsy.googlegroups.com>
Source record: 5202
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On May 1, 7:43 am, _ <jtayNOSPAM...@hfDONTSENDMESPAMx.andara.com>
wrote:
> ...and if so what can I do about it?
>

yes it seems so...I have seen the same thing with those devices.

it is very difficult to solve, you would need better antennas...

in your case it may be more practical to use a coax wired connection

For electrical saftey around water...be VERY careful that all
equipment is properly grounded, that the outlet grounds are wired
properly and I would also use GFI circuits.

Mark

## 617. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 15:25:12 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0805011123180.15566@darkstar.example.org>
Source record: 5203

On Thu, 1 May 2008, geek wrote:

> Hi,
>
> <snip>
>
>> Alternatives are the 6JH8 and 6ME8, which are less expensive and more
>> common.
>
> I've done some experiments with the 6ME8 and it's horribly noisy compared
> to the 7360.... or even a 6BE6 for that matter :-\
>
You're not going to get a balanced mixer out of a single 6BE6 either.

But, on does have the advantage that beam deflection tubes aren't just
used as first mixers. Balanced modulators and mixers in SSB transmitters.
Product detector in a receiver. There, noise isn't the same issue
as in a first mixer.

Michael VE2BVW

## 618. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 16:12:21 UTC
From: Keith M <keithvz@yanktheobvious.verizon.net>
Message-ID: <FZISj.8133$PY5.3368@trnddc01>
Source record: 5204
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

_ wrote:

> I have a cobbled-together setup that almost works. I coach swimming, and I
> have a small video gadget

Well that's the first problem. Those cheap video transmitters are
barely worth what you paid for them. There is a huge quality and price
difference between models. Pay $50 and you get $50 worth of video quality.

> The ceiling and the upper half of the inside walls of the pool are panelled
> with strips of aluminium sheathing - about 6 inches wide and 20 or more
> feet long.

Ok, so not really a perfect environment for wireless. :)

> What's the best guess for improving the picture?

Get a better unit. Can you possibly run cable? Either use a better
grade of video cable, or use a video-over-copper extender if the cable
path is pretty long. Oh, and stay away from cheap video baluns too.

> More power?

If you have true line of sight, you are probably ok with the power.

> Different
> frequency?

Is this really something you can change? I mean more than just a
frequency within a range? If you can change bands, then maybe --- that
usually takes dual-radios etc.

> Antenna mounting (I could wear a beanie with it sticking up
> from the top - that'd be cool)?

The other poster Wimpie is right on. If you think it's multipath, then
either use antenna diversity by using two antennas (which of course your
radio has to support), or try using a directional antenna with a tight
beamwidth. The stronger (higher dbi gain) antenna will have a smaller
horizontal/vertical beamwidth. And so the chances of multipath will be
lessened.

Keith

## 619. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 16:17:46 UTC
From: amdx <amdx@knology.net>
Message-ID: <899a0$4819ed2e$450139ad$14375@KNOLOGY.NET>
Source record: 5205
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"_" <jtayNOSPAMlor@hfDONTSENDMESPAMx.andara.com> wrote in message
news:1hyqimxunfulr$.rxi9kepwelq5.dlg@40tude.net...
> ...and if so what can I do about it?
>
> I have a cobbled-together setup that almost works. I coach swimming, and
> I
> have a small video gadget that links to a Tivo and a TV via one of those
> video transmitters that you can get from ebay. I think it is a 1.2 gHz
> 50mw version.
>
> The kids swim and then watch, and having the Tivo means there's a
> continuous flow of action. The problem is that the picture quality is
> bad.
> I'm only 20 metres away and there is a direct line-of-sight from
> transmitter to reciever - ocassionally with a body or two in the way; but
> even without, there is considerable jumping and colour distortion and
> generally a bad picture. If I stand still at just about any distance I
> can
> find a place that gets a good picture, but moving - even turning - makes
> it
> change.
>
> The ceiling and the upper half of the inside walls of the pool are
> panelled
> with strips of aluminium sheathing - about 6 inches wide and 20 or more
> feet long. These are separated by about a 1-inch gap along the long
> edges,
> and mounted to a framework (which is mounted to concrete) with some sort
> of
> clip arrangement. This is a box about 220 feet long and 25 feet high.
>
> What's the best guess for improving the picture? More power? Different
> frequency? Antenna mounting (I could wear a beanie with it sticking up
> from the top - that'd be cool)?

No beanie but, http://www.detroitatvrepeater.com/rcplane.htm
Mike

## 620. In search of: 2SK1740's, 2SK125's

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 17:56:20 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <5b9bd44c-1ebb-46a1-b54f-1c3b6d3039f1@i76g2000hsf.googlegroups.com>
Source record: 5207

A number of new radios with high-performance front ends use 2SK1740's in the mixers. (e.g. the 756Pro3, Omni 7n - in fact you can find their schematics on the web). If I wanted to grab a couple of these for my experimentation, where could I buy them? They're almost certainly surface mount but that's OK.

The previous generation part of choice seems to be the 2SK125 (as illustrated in the ARRL handbook) and I'd like to find some of these too but these seem to be obsolete.

Any other parts to look at? Sabin was using the 2N4416 (common-source but same idea) in 1970. Today would a J310 be about equivalent?

Is the actual part number less important than matching when it comes to performance?

Tim N3QE

# 621. Re: 12BA6 -or- 12BE6 AM BC Low-Power Transmitter Help Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 20:55:04 UTC
From: Mike <nomtrxspam@comcast.net>
Message-ID: <tkak14ptsb6nqjjl03q48qbu06glbqfiif@4ax.com>
Source record: 5208

On Thu, 01 May 2008 11:56:16 +0800, Ty Unes <riverty@gmail.com> wrote:

>I have a handful of 12BA6 and 12BE6 tubes. I also could use an AM
>broadcast band transmitter for use around the house. I was wondering if
>these tubes could be used for a 1 or 2 tube transmitter in the BC band
>at 100mw or lower. Searching on the internet, I have found a few
>circuits all using different tubes but not these.
>
>I love building and troubleshooting tube circuits but I lack the
>knowledge to "engineer" a circuit using these tubes. I wonder if someone
>would be kind enough to offer some advice on how I could get this done.
>Do you have a schematic of a circuit that would use these tubes? Is it
>even possible with these tubes? Is it a fairly easy task for someone
>with the knowledge to create a schematic for this?
>
>Thanks for your time.
>
>Ty Unes - OP, Ks.

Take a look at this one. http://www.dogstar.dantimax.dk/tubestuf%20/amtx-1.htm
The problem will be finding a crystal for an unused frequency in your area.

or maybe this will help. http://www.geocities.com/wa2ise/radios/amxmit.html

Mike

"In view of such harmony in the cosmos which I,
with my limited human mind, am able to recognize,
there are yet people who say there is no God.
But what really makes me angry is that they quote
me for the support of such views."
Albert Einstein (theoretical Physicist)

## 622. Re: 7360/6AR8 mixer configs

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 22:01:46 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.05.01.22.01.45.126865@localhost.localdomain>
Source record: 5209

On Thu, 01 May 2008 11:25:12 -0400, Michael Black wrote:

> On Thu, 1 May 2008, geek wrote:
>
>> Hi,
>>
>> <snip>
>>
>>> Alternatives are the 6JH8 and 6ME8, which are less expensive and more
>>> common.
>>
>> I've done some experiments with the 6ME8 and it's horribly noisy compared
>> to the 7360.... or even a 6BE6 for that matter :-\
>>
> You're not going to get a balanced mixer out of a single 6BE6 either.
>
> But, on does have the advantage that beam deflection tubes aren't just
> used as first mixers. Balanced modulators and mixers in SSB transmitters.
> Product detector in a receiver. There, noise isn't the same issue
> as in a first mixer.
>
> Michael VE2BVW

Indeed!

My tests were based on the first mixer for a SW receiver (gah, which I
have still to build >.< )

Cheers!

--
Gregg

## 623. looking for construction article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 22:03:49 UTC
From: Howard W3CQH <hsgorden@comcast.net>
Message-ID: <Fqadnefe5YmJo4fVnZ2dnUVZ_jSdnZ2d@comcast.com>
Source record: 5210

Looking for some information -

A while back - someone put together an article - whereas they made single board computer in a keybd - with sound card & either usb or serial ports and port for external Hard drive & screen.. and it ran on XP..

I want to use this on HF/VHF portable operation!

Due to a system crash a bit ago I seemed to have misplaced the construction article..

Anybody happen to have a copy?

73's

# 624. Re: 12BA6 -or- 12BE6 AM BC Low-Power Transmitter Help Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 22:04:00 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.05.01.22.04.00.139589@localhost.localdomain>
Source record: 5211

On Thu, 01 May 2008 16:55:04 -0400, Mike wrote:

> On Thu, 01 May 2008 11:56:16 +0800, Ty Unes <riverty@gmail.com> wrote:
>
>>I have a handful of 12BA6 and 12BE6 tubes. I also could use an AM
>>broadcast band transmitter for use around the house. I was wondering if
>>these tubes could be used for a 1 or 2 tube transmitter in the BC band
>>at 100mw or lower. Searching on the internet, I have found a few
>>circuits all using different tubes but not these.
>>
>>I love building and troubleshooting tube circuits but I lack the
>>knowledge to "engineer" a circuit using these tubes. I wonder if someone
>>would be kind enough to offer some advice on how I could get this done.
>>Do you have a schematic of a circuit that would use these tubes? Is it
>>even possible with these tubes? Is it a fairly easy task for someone
>>with the knowledge to create a schematic for this?
>>
>>Thanks for your time.
>>
>>Ty Unes - OP, Ks.
>
>
> Take a look at this one. http://www.dogstar.dantimax.dk/tubestuf%20/amtx-1.htm
> The problem will be finding a crystal for an unused frequency in your area.

I have that exact transmitter here - it'll take synthesized RF OK if
you want to get fancy and have no xtal :-)

Cheers,

--
Gregg

## 625. 455Khz Coil ID Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 22:06:30 UTC
From: Ty Unes <riverty@kc.rr.com>
Message-ID: <481a3ee6$0$12976$4c368faf@roadrunner.com>
Source record: 5212

Could someone please help me identify what coil I should use for this circuit? I need the 455Khz ocillator coil.

The circuit in question can be found here:

http://2xl.homelinux.com/riverty/downloads/radio/xmitter.gif

Pictures of the coils in question are here:

http://2xl.homelinux.com/riverty/downloads/radio/dscn1573.jpg
http://2xl.homelinux.com/riverty/downloads/radio/dscn1574.jpg

Thank you for your help.

## 626. Re: In search of: 2SK1740's, 2SK125's

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 22:07:08 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.05.01.22.07.08.449545@localhost.localdomain>
Source record: 5213

Hi,

I saw a thread on diyAudio.com a while back a fellow had a pile of
obsolete transistors (rf transistors are often used by us HiFi nuts).
Maybe you can find some there on a search?

Cheers,

--
Gregg

# 627. Re: In search of: 2SK1740's, 2SK125's

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-01 23:00:31 UTC
From: Gerry <breakeronthesideletitslide@yahoo.co.uk>
Message-ID: <481a4b8c$1_4@mk-nntp-2.news.uk.tiscali.com>
Source record: 5214

Tim Shoppa wrote:
> A number of new radios with high-performance front ends use 2SK1740's
> in the mixers. (e.g. the 756Pro3, Omni 7n - in fact you can find their
> schematics on the web). If I wanted to grab a couple of these for my
> experimentation, where could I buy them? They're almost certainly
> surface mount but that's OK.
>
> The previous generation part of choice seems to be the 2SK125 (as
> illustrated in the ARRL handbook) and I'd like to find some of these
> too but these seem to be obsolete.
>
> Any other parts to look at? Sabin was using the 2N4416 (common-source
> but same idea) in 1970. Today would a J310 be about equivalent?
>
> Is the actual part number less important than matching when it comes
> to performance?
>
> Tim N3QE
Have you tried calling ten tec? They are usually able to supply spares
at reasonable prices.

Gerry....

## 628. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 02:48:04 UTC
From: mpm <mpmillard@aol.com>
Message-ID: <e256f3f7-0289-44c0-8d93-939e267ef28a@2g2000hsn.googlegroups.com>
Source record: 5215
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On May 1, 7:43 am, _ <jtayNOSPAM...@hfDONTSENDMESPAMx.andara.com>
wrote:
> ...and if so what can I do about it?

Are you holding the transmitter while you're moving?

I am picturing you walking along the side of the pool as the kids swim
from end to end.
It's quite possible you are detuning the transmitting antenna when you
step.

This could be electromagnetic coupling, capacative, or who knows
what??.
The fact that you can stand still and get a good picture is a clue. -
one that would seem to eliminate the multi-path thoeries....

I generally agree you get what you pay for. But at 1.2GHz, these are
going to be very small wavelengths. My first inclination is that this
is not a multipath problem, though it is impossible to tell without
further experimentation, and knowing a lot more about exactly what
type of modulation scheme is being used.

I second the thought about electrical safety around kids and water.
-mpm

.

## 629. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 02:58:09 UTC
From: mpm <mpmillard@aol.com>
Message-ID: <bf51d8ec-3e90-492a-845e-9ae6de199b52@2g2000hsn.googlegroups.com>
Source record: 5216
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On May 1, 10:48 pm, mpm <mpmill...@aol.com> wrote:

> I second the thought about electrical safety around kids and water.
> -mpm
>
> .

Oops, another thought just came to me.
If you're moving the camera / transmitter, it might have a real
chicken-s^it timebase (crystal?) or whatever and could be sensitive to
motion and going slightly off frequency with every bump (step taken).
Maybe you can eliminate this possibiliity by walking very softly.
Like that Karate guy on TV used to do on the onion paper... :)

# 630. Re: 455Khz Coil ID Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 04:08:56 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <32cb516c-cb89-47f9-896b-7e9b359a5ea8@b9g2000prh.googlegroups.com>
Source record: 5217

On May 1, 3:06 pm, Ty Unes <rive...@kc.rr.com> wrote:
> Could someone please help me identify what coil I should use for this
> circuit? I need the 455Khz ocillator coil.
>
> The circuit in question can be found here:
>
> http://2xl.homelinux.com/riverty/downloads/radio/xmitter.gif
>
> Pictures of the coils in question are here:
>
> http://2xl.homelinux.com/riverty/downloads/radio/dscn1573.jpghttp://2xl.homelinux.com/riverty/downloads/radio/dscn1574.jpg
>
> Thank you for your help.

_PLEASE_ don't even THINK of using that circuit! There is no
isolation between the 120V input power and the audio connector.
That's just plain DANGEROUS!

(I'd also like to know why you want to put a transmitter on 455kHz...)

Cheers,
Tom

# 631. Re: 12BA6 -or- 12BE6 AM BC Low-Power Transmitter Help Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 12:03:20 UTC
From: jimmie68@gmail.com
Message-ID: <11d31b06-ecac-4605-a226-6091ee307e5b@v26g2000prm.googlegroups.com>
Source record: 5218

On May 1, 6:04 pm, geek <g...@localhost.localdomain> wrote:
> On Thu, 01 May 2008 16:55:04 -0400, Mike wrote:
> > On Thu, 01 May 2008 11:56:16 +0800, Ty Unes <rive...@gmail.com> wrote:
>
> >>I have a handful of 12BA6 and 12BE6 tubes. I also could use an AM
> >>broadcast band transmitter for use around the house. I was wondering if
> >>these tubes could be used for a 1 or 2 tube transmitter in the BC band
> >>at 100mw or lower. Searching on the internet, I have found a few
> >>circuits all using different tubes but not these.
>
> >>I love building and troubleshooting tube circuits but I lack the
> >>knowledge to "engineer" a circuit using these tubes. I wonder if someone
> >>would be kind enough to offer some advice on how I could get this done.
> >>Do you have a schematic of a circuit that would use these tubes? Is it
> >>even possible with these tubes? Is it a fairly easy task for someone
> >>with the knowledge to create a schematic for this?
>
> >>Thanks for your time.
>
> >>Ty Unes - OP, Ks.
>
> > Take a look at this one.http://www.dogstar.dantimax.dk/tubestuf%20/amtx-1.htm
> > The problem will be finding a crystal for an unused frequency in your area.
>
> I have that exact transmitter here - it'll take synthesized RF OK if
> you want to get fancy and have no xtal :-)
>
> Cheers,
> __
> Gregg- Hide quoted text -
>
> - Show quoted text -

I built the Muntz circuit(or very similar) back when I was in high
school in the 60s. I lived about 3 blocks from the school and could
still pick up the signal there on a small transistor radio. I was
rebroadcasting a commercial AM station I couldnt pickup on my little
transistor radio.

Jimmie

# 632. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 12:58:33 UTC
From: Frank Raffaeli <SNIPrf_man_frTHIS@yahoo.com>
Message-ID: <54e908a7-eb67-49e0-896b-13310010d212@j22g2000hsf.googlegroups.com>
Source record: 5219
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On May 1, 9:58 pm, mpm <mpmill...@aol.com> wrote:
> On May 1, 10:48 pm, mpm <mpmill...@aol.com> wrote:
>
> > I second the thought about electrical safety around kids and water.
> > -mpm
>
> > .
>
> Oops, another thought just came to me.
> If you're moving the camera / transmitter, it might have a real
> chicken-s^it timebase (crystal?) or whatever and could be sensitive to
> motion and going slightly off frequency with every bump (step taken).
> Maybe you can eliminate this possibiliity by walking very softly.
> Like that Karate guy on TV used to do on the onion paper... :)

It is almost certainly multipath: The frequency, mobility, and environment are wrong for what you're trying to do. If you can lower the frequency - the lower, the better - then this will help. For example, 72 MHz. You an make it legal by applying for an experimenter's permit (if in the USA, see FCC form 442).

I'm not sure if you can find any commercial transmitters below 900 MHz, so you may need to DIY.

There may be wireless products for DVB-H, DVB-T which would theoretically be an improvement.

As one poster mentioned, your best bet may be a cable.

Frank Raffaeli

## 633. PE6011-40 transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 15:34:15 UTC
From: jimmie68@gmail.com
Message-ID: <abeb6b1f-1c4f-4935-8973-44f8c7adedbe@y18g2000pre.googlegroups.com>
Source record: 5220

Im looking for the specs on a PE6011-40 transistor. Seems like it is a discontined obsolete item. Im more interersted in its specs than finding a cross.

THX Jimmie

## 634. Re: Transmitter Circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 16:43:09 UTC
From: cooper.tim@gmail.com
Message-ID: <3f7f9d2c-a7db-4a30-90f2-b2a64c60bdf4@r66g2000hsg.googlegroups.com>
Source record: 5221

On Apr 24, 6:08 pm, "Theo" <theodore.twy...@ntlworld.com> wrote:
> I am trying to locate the article for a simple 2 transistor topband AM phone
> transmitter
> from many years ago that I am sure appeared in "Practical Wireless" sometime
> between 1958 and 1965.
> If memory serves me correctly, it used two germanium transistors, OC71 and
> OC44.
> The OC71 was configured as a microphone amp/modulator and the OC44 as a
> Hartley oscillator.
> The oscillator coil was wound on a short piece of ferrite rod.
> I wonder if anyone can help in any way?

Just found your question whilst searching oc71 on google and this page
is just above it on the results:

http://www.arar93.dsl.pipex.com/mds975/content/trfradios02.html

Is it what you're looking for?

Cheers,
Tim

# 635. Re: MC1350 - Low noise replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 19:31:26 UTC
From: bswadener@yahoo.com
Message-ID: <a6a998d9-d0f2-469e-bc90-bec573a0be4b@w74g2000hsh.googlegroups.com>
Source record: 5222

On Mar 25, 8:13 am, Emil wrote:
> Hello,
>
> I'm looking for an IF amp (w/agc and 50db max gain is ample) to use as a
> replacement for an MC1350. Main reason is noise reduction. Doesn't
> necessarily need be in 8-pin dip package, however, not enough room for an
> entirely built-up amp.
>
> Suggestions appreciated.
>
> Thanks,
> Emil

Analog Devices has the AD603 et al. From the AD603 datasheet:

"The AD603 is a low noise, voltage-controlled amplifier for use in RF
and IF AGC systems. It provides accurate, pin-selectable gains of -11
dB to +31 dB with a bandwidth of 90 MHz or +9 dB to 51+ dB with a
bandwidth of 9 MHz."

Bryan WA7PRC

## 636. Items I would like to trade

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-02 23:24:31 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <481ba2b0$0$11620$607ed4bc@cv.net>
Source record: 5223
Cross-posted to:
rec.radio.swap,rec.radio.amateur.swap,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur

I have these following items I can't use and I would like to trade for items I can use.

Shure Hand Held Mic.. cm 16r This is a noise canceling mobile mic. with a 6 pin plug NEW.. and I can't use it.

Slinky Dipole antenna. 10-80 mtrs.. With directions. This is a new antenna and it was never installed.

Motorola 12 volt power supply. I was told this is 12 amps.. could be 16 maps

Model HPN 1004A.. Needs minor work.. fraid power cord. other wise its working. not enough current for my needs. And I can't store it in my small apartment.

Motorola white external speaker. No mounting bracket. But in nice shape,

I would be interesting in trading for 20-25 amp power supply,, 12 volts Need not be working. Astron.. or something like it. Or power supply parts.

Antenna tuner,, or parts for a antenna tuner. If it needs work I am open for that. MFJ.. or someother

Please e-mail me at mkulyk@optonline.net

73 mike wb2glw

# 637. Re: 455Khz Coil ID Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-03 04:28:18 UTC
From: Ty Unes <riverty@kc.rr.com>
Message-ID: <481be9e2$0$20159$4c368faf@roadrunner.com>
Source record: 5224

On Thu, 01 May 2008 21:08:56 -0700, K7ITM wrote:

> On May 1, 3:06 pm, Ty Unes <rive...@kc.rr.com> wrote:
>> Could someone please help me identify what coil I should use for this
>> circuit? I need the 455Khz ocillator coil.
>>
>> The circuit in question can be found here:
>>
>> http://2xl.homelinux.com/riverty/downloads/radio/xmitter.gif
>>
>> Pictures of the coils in question are here:
>>
>> http://2xl.homelinux.com/riverty/downloads/radio/dscn1573.jpg

http://2xl.homelinux.com/riverty/downloads/radio/dscn1574.jpg
>>
>> Thank you for your help.
>
> _PLEASE_ don't even THINK of using that circuit! There is no isolation
> between the 120V input power and the audio connector. That's just plain
> DANGEROUS!
>
> (I'd also like to know why you want to put a transmitter on 455kHz...)
>
> Cheers,
> Tom

LOL - Don't worry. I'm not using _THAT_ power supply. I made a solid-state
supply that gives me 12V ~120ma heater voltage and ~180V B+. Isolated from
the mains. But I thank you for pointing that out. Ya never know!

No. I'm trying to verify that the coil in the pictures found here

http://2xl.homelinux.com/riverty/downloads/radio/dscn1573.jpg
http://2xl.homelinux.com/riverty/downloads/radio/dscn1574.jpg

not the IF transformers in square cans - BTW, could be used for the
ocillator tank in this circuit found here

http://2xl.homelinux.com/riverty/downloads/radio/xmitter.gif

There are no markings except for a brush-stroke of orange on one end. This
coil was salvaged out of an old AA5 radio and I *think* it's for this
purpose. Can anyone verify this?

Thanks again.

# 638. Re: 455Khz Coil ID Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-03 07:23:18 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <s04o141mnom7bi6e419a0trs32sj98i99e@4ax.com>
Source record: 5225

On Thu, 1 May 2008 21:08:56 -0700 (PDT), K7ITM <k7itm@msn.com> wrote:

>On May 1, 3:06 pm, Ty Unes <rive...@kc.rr.com> wrote:

>> The circuit in question can be found here:
>>
>> http://2xl.homelinux.com/riverty/downloads/radio/xmitter.gif
>>

>_PLEASE_ don't even THINK of using that circuit! There is no
>isolation between the 120V input power and the audio connector.
>That's just plain DANGEROUS!

That circuit definitively requires an audio transformer with isolation rated many times the mains voltage. Also the antenna and antenna ground connection require capacitors with considerable voltage rating.

At least in Europe, with line voltages about 220 V, AC/DC receivers were common with similar circuits using U-series tubes with 100 mA series heaters. The antenna and ground connection was typically rated at 3750 VDC. Most televisions in Europe in the pre-transistor era used 300 mA P-series heaters. In both radios and televisions a half wave rectifier was used, with an anode power supply around 200 Vdc.

Of course you should always check the orientation of the mains plug, before working within a live chassis. Current regulations require the use of an insulation transformer when working inside equipment with such power supply.

Paul OH3LWR

## 639. Re: Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-04 03:43:58 UTC
From: "Leland C. Scott" <kc8ldo@arrl.net>
Message-ID: <kKadnb4OUdxxrYDVnZ2dnUVZ_iydnZ2d@comcast.com>
Source record: 5226

I don't know why everybody always seems to recommend the Microchip series of controllers, they aren't the only thing out there.

Check out the chips from Parallax, namely the SX28.

http://www.parallax.com/Store/Microcontrollers/SXChips/tabid/138/CategoryID/15/List/0/SortField/0/Level/a/ProductID/355/Default.aspx

If you need more I/O then you can use the surface mount version that has more pins.

http://www.parallax.com/Store/Microcontrollers/SXChips/tabid/138/CategoryID/15/List/0/SortField/0/Level/a/ProductID/354/Default.aspx

Or try using the BASIC Stamp computer system on a board.

http://www.parallax.com/tabid/214/Default.aspx

For prototype work check out the system below:

http://www.parallax.com/Store/Microcontrollers/BASICStampModules/tabid/134/txtSearch/28138/List/1/ProductID/123/Default.aspx?SortField=ProductName%2cProductName

http://www.parallax.com/Store/Microcontrollers/SXTools/tabid/139/CategoryID/17/List/0/SortField/0/Level/a/ProductID/494/Default.aspx

The programming software and a BASIC compiler are all free downloads from Parallax's web site.

For keyboards and LCD displays look at:

http://www.parallax.com/Store/Components/Other/tabid/157/CategoryID/32/List/0/SortField/0/Level/a/ProductID/194/Default.aspx

http://www.parallax.com/Store/Microcontrollers/BASICStampModules/tabid/134/List/1/ProductID/55/Default.aspx?txtSearch=lcd+displays&SortField=ProductName%2cProductName

Here is a whole collection of LCD displays coving a range of price points.

http://www.parallax.com/Store/Accessories/Displays/tabid/159/CategoryID/34/List/0/Level/a/Default.aspx?SortField=ProductName,ProductName

If you have a need to do a fair amount of floating point math then check out the math coprocessors for the microcontrollers.

http://www.parallax.com/Store/Components/IntegratedCircuits/TimeMathCoprocessors/tabid/617/CategoryID/82/List/0/SortField/0/Level/a/ProductID/244/Default.aspx

http://www.parallax.com/Store/Components/IntegratedCircuits/TimeMathCoprocessors/tabid/617/CategoryID/82/List/0/SortField/0/Level/a/ProductID/401/Default.aspx

I think that you'll find everything you need available from this one source
for the project you have in mind. I have the professional prototype board,
floating point processor, a 2 line LCD display that plugs in to the
prototype board and several of the SX28 chips myself. I'm still waiting to
get the USB programming key. Right now I have to barrow my friend's serial
version of the programming key to try out some design ideas.

--
Regards,
Leland C. Scott
KC8LDO

"RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
news:YB5Rj.55753$Q52.26207@bignews9.bellsouth.net...
>
> I have a project I would like to build, and this would be for me a first
> time PIC controller project.
>
> I am looking for a PIC to do the following:
>
> 1. Address 17 parallel binary weighted bits (need at least 17 I/O's in
> addition to inputs from (2) below and outputs for LCD (3) below.
> 2. Have a keypad or rotary encoder to select combinations of the above
> bits.
> 3. An LCD display of a frequency generated by the PLL device attached to
> it per instructions below in (4).
> 4. Be able to enter a frequency such as 2300.6375 MHz, and do the math
> to subtract an IF frequency and divide the resultant frequency by some
> multiplier to address the parallel bits.
>
> The PIC should be available with an evaluation board containing an LCD
> display a keypad or rotary encoder. I do not want to have to design a
> circuit board for a one time project.
>
> For background, I have a Scientific Atlanta synthesizer that is designed
> to generate a frequency in the range of 100.2x to 110.7x MHz to phase
> lock a microwave brick oscillator used for a C band satellite up and
> downconvertor. The unit has an external BCD switch which is designed to
> display 3200.XX to 4200.XX MHz and I wish to re purpose it for a
> different frequency band.
>
> Any recommendations?
>
>
>
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"
>
> "Treason doth never prosper: what's the reason?

> For if it prosper, none dare call it treason."
>
> "Follow The Money" ;-P

## 640. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-04 04:17:10 UTC
From: "Leland C. Scott" <kc8ldo@arrl.net>
Message-ID: <5aadnaEL1OUopYDVnZ2dnUVZ_qCunZ2d@comcast.com>
Source record: 5227

Did you look at the B-H curves for the material you're using? Any magnetic material will be non-linear to some degree. Normally the lower the peak flux density you operate the material at the more linear the B-H curve. Generally ferrite will have lower losses compared to powered iron. However powered iron has more tolerance to small DC bias in the core without saturating the material. Which brings up another point you should not operate the core with a DC current flowing through the winding if you can avoid it. The best you can do is find the combination that provides the inductance you need while operating the core material at the lowest flux level you can get away with using which tends to suggest using a high permeability material using the least number of turns to get the needed inductance. The flux density is proportional to the number of turns on the core and the current in the wire (ampere-turns which is the "B" field on the B-H curves). As you noticed the higher permeability material seems to work better, that 's what I would have expected. That's my 2 cents worth of advice.

--
Regards,
Leland C. Scott
KC8LDO

"K7ITM" <k7itm@msn.com> wrote in message
news:f6031172-ef5e-434e-a80f-25ff508a718a@l64g2000hse.googlegroups.com...
>I have an interest in making RF filters with low distortion (for
> example, as preselection filters for receivers). I've found that very
> often I need to use air-core coils to get the low distortion I want,
> but it would be convenient if I could use powdered iron or ferrite
> core toroids to get higher Q at low frequencies without having to make
> the coils physically big. I've always assumed that powdered iron
> would give me the best results, but someone suggested I try low-
> permeability ferrite. I just did some experiments with that. I wound
> three toroids, all 0.37 inch OD cores; one is on mix 2 powdered iron,
> and the other two are on type 68 and type 67 ferrite. I put each
> coil in a simple 1MHz high pass filter: two 2.2nF caps in series,
> with the coil connected between them to ground. I tested for harmonic
> distortion with a 1MHz input, and for the 2.42MHz intermod product
> with 0.62MHz and 1.52Mhz inputs.
>
> With about +16dBm coming out of the test filter at 1MHz, I measured
> second harmonic at about -95dBc for the T37-2, -90dBc for the FT37-67
> and -57 for the FT37-68; the third was at -74dBc, -61dBc and -51dBc
> for the three coils in the same order.
>
> The 2.42MHz intermod, with each tone at +18.5dBm out of the combiner,
> measured -71dBc, -58dBc and -38dBc for the coils, again in the same

> order.
>
> My conclusion from this is that at least these two ferrites aren't
> going to help me in my search for a better low-distortion core
> material, but at the same time, it was interesting to note that the
> higher permeability -67 performed better by far than the lower
> permeability -68. It gives me some hope that if the ferrite materials
> guys went looking for a formulation that would be specifically as low-
> distortion as they could get, they might find something pretty good.
>
> Before someone asks, no, I didn't run a T37-6 core coil along with
> these. I expect it would be a little better than the T37-2. And I've
> measured a few coils wound on (unknown formulation) powdered iron rods
> that show significantly lower distortion than those on toroid cores;
> but of course those have a large "air gap" and relatively high
> external field.
>
> Cheers,
> Tom

# 641. Re: 12BA6 -or- 12BE6 AM BC Low-Power Transmitter Help Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-04 15:22:25 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <_vkTj.70130$vr3.55029@bignews2.bellsouth.net>
Source record: 5228

geek wrote:
> On Thu, 01 May 2008 16:55:04 -0400, Mike wrote:
>
>> On Thu, 01 May 2008 11:56:16 +0800, Ty Unes <riverty@gmail.com> wrote:
>>
>>> I have a handful of 12BA6 and 12BE6 tubes. I also could use an AM
>>> broadcast band transmitter for use around the house. I was wondering if
>>> these tubes could be used for a 1 or 2 tube transmitter in the BC band
>>> at 100mw or lower. Searching on the internet, I have found a few
>>> circuits all using different tubes but not these.
>>>
>>> I love building and troubleshooting tube circuits but I lack the
>>> knowledge to "engineer" a circuit using these tubes. I wonder if someone
>>> would be kind enough to offer some advice on how I could get this done.
>>> Do you have a schematic of a circuit that would use these tubes? Is it
>>> even possible with these tubes? Is it a fairly easy task for someone
>>> with the knowledge to create a schematic for this?
>>>
>>> Thanks for your time.
>>>
>>> Ty Unes - OP, Ks.
>>
>> Take a look at this one. http://www.dogstar.dantimax.dk/tubestuf%20/amtx-1.htm
>> The problem will be finding a crystal for an unused frequency in your area.
>
> I have that exact transmitter here - it'll take synthesized RF OK if
> you want to get fancy and have no xtal :-)
>
> Cheers,
> __
> Gregg
I built one just like that using a 14A7 loktal tube (same as 12SA7).
Mine wasn't crystal controlled, I used an oscillator coil from a BCB set
tuned with a 365pf variable to set the frequency, and a 2.5mh rf choke
in the plate. Worked great.

I also went 'high power' with a 2 tube bcb transmitter using an 6F6
oscillator modulated by another 6F6 (250v on plates).

## 642. Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-05 03:27:10 UTC
From: Toby <josdek2@aol.com>
Message-ID: <i8vTj.791$b%1.295@trndny04>
Source record: 5229

I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people have modified this model to become a variable voltage supply but have not found any schematics etc for this mod. Can anyone point me in the right direction? Thanks!

## 643. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-05 06:51:08 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.05.05.06.51.07.884804@localhost.localdomain>
Source record: 5231

On Mon, 05 May 2008 02:04:09 -0500, Ralph Mowery wrote:

>
> "Toby" <josdek2@aol.com> wrote in message news:i8vTj.791$b%1.295@trndny04...
>>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
>>have modified this model to become a variable voltage supply but have not
>>found any schematics etc for this mod. Can anyone point me in the right
>>direction? Thanks!
>>
>
> Here is the schematic for a 35, it should ve similar to the 20 except for
> an extra pass transistor or two.
>
> http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg

I modded one of those significantly. Too long ago to remember the exact
thing I did, but DO put that crowbar SCR anode on the collector of the
pass transistors. If it trips as is, you kiss the current meter and
expensive current sense resistor goodbye.

Cheers,

--
Gregg

## 644. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-05 07:04:09 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <lLWdnSJsft_BPoPVnZ2dnUVZ_umdnZ2d@earthlink.com>
Source record: 5230

"Toby" <josdek2@aol.com> wrote in message news:i8vTj.791$b%1.295@trndny04...
>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
>have modified this model to become a variable voltage supply but have not
>found any schematics etc for this mod. Can anyone point me in the right
>direction? Thanks!
>

Here is the schematic for a 35, it should ve similar to the 20 except for
an extra pass transistor or two.

http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg

## 645. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-05 13:29:18 UTC
From: mrhaney <w4pqw@cox.net>
Message-ID: <10114ded-ce95-4dfe-9c3c-a7440888c695@m73g2000hsh.googlegroups.com>
Source record: 5232

On May 4, 10:27 pm, "Toby" <josd...@aol.com> wrote:
> I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
> have modified this model to become a variable voltage supply but have not
> found any schematics etc for this mod. Can anyone point me in the right
> direction? Thanks!

If you will install a 2500 ohm pot between pin 5 and 6 on the
regulator chip ,that will give you variable output.. I agree with the
use of the crowbar circuit, saves damaging your equipment and damaging
the power supply too.. GL W4PQW

# 646. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-05 19:12:43 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <51nu141fm7nbn8500lrbl9qlv8t1nk5t3g@4ax.com>
Source record: 5233

On Mon, 05 May 2008 03:27:10 GMT, "Toby" <josdek2@aol.com> wrote:

>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
>have modified this model to become a variable voltage supply but have not
>found any schematics etc for this mod. Can anyone point me in the right
>direction? Thanks!

While the output voltage of practically any regulated linear power supply can be varied by changing one or two resistors, one should remember that the power dissipation in the series pass transistors will increase significantly, if voltages much below the nominal voltage is required, thus you may have to increase the number of series pass transistors or at least increase the heatsink surface 2-4 times the original.

Also you may have to use some foldback current limitation system to keep the series pass transistor dissipation at a reasonable level e.g. when driving car head lights or other nearly short circuit loads.

When fully understanding these issues, the commercially available devices can be quite interesting building blocks, when creating power supplies for your own needs.

Paul OH3LWR

# 647. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-05 19:16:12 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <fa8d3742-dd22-47a1-a2e1-a93d9e03d7d1@26g2000hsk.googlegroups.com>
Source record: 5234

On May 3, 9:17 pm, "Leland C. Scott" <kc8...@arrl.net> wrote:
> Did you look at the B-H curves for the material you're using? Any magnetic
> material will be non-linear to some degree. Normally the lower the peak flux
> density you operate the material at the more linear the B-H curve. Generally
> ferrite will have lower losses compared to powered iron. However powered
> iron has more tolerance to small DC bias in the core without saturating the
> material. Which brings up another point you should not operate the core with
> a DC current flowing through the winding if you can avoid it. The best you
> can do is find the combination that provides the inductance you need while
> operating the core material at the lowest flux level you can get away with
> using which tends to suggest using a high permeability material using the
> least number of turns to get the needed inductance. The flux density is
> proportional to the number of turns on the core and the current in the wire
> (ampere-turns which is the "B" field on the B-H curves). As you noticed the
> higher permeability material seems to work better, that 's what I would have
> expected. That's my 2 cents worth of advice.
>
> --

I had no particular interest in looking at the B-H curves, since it's
distortion in filters I'm interested in, and that's easy for me to
test directly.

With respect to flux density: there seems to be a bit of a disconnect
between what I know and what you've written. From Faraday's law of
magnetic induction, I expect that for the same inductance with fewer
turns, the flux density must be higher: if the inductance is the
same, the voltage must be the same for a given current at the test
frequency. The same voltage with fewer turns around the same cross-
section core implies higher flux density. No?

So far, my tests suggest that you can't draw any conclusions one way
or the other from only the relative permeability of the core
material. Ideally, you should do tests in the actual application. My
testing is slightly derailed (I hope temporarily) because the cores I
got that were supposed to be FT50-67 are clearly something different,
almost certainly FT50-61. I am testing all the other low-to-medium
permeability (F)T-50 cores I have available at the moment.

Cheers,
Tom

## 648. Re: Suggestions for a PIC for a one time project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-05 22:13:25 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <481F8685.7010405@NETTALLY.COM>
Source record: 5235

Leland C. Scott wrote:
> I don't know why everybody always seems to recommend the Microchip series of
> controllers, they aren't the only thing out there.
>
> Check out the chips from Parallax, namely the SX28.
>
> http://www.parallax.com/Store/Microcontrollers/SXChips/tabid/138/CategoryID/15/List/0/SortField/0/Level/a/ProductID/355/Default.aspx
>
> If you need more I/O then you can use the surface mount version that has
> more pins.
>
> http://www.parallax.com/Store/Microcontrollers/SXChips/tabid/138/CategoryID/15/List/0/SortField/0/Level/a/ProductID/354/Default.aspx
>
> Or try using the BASIC Stamp computer system on a board.
>
> http://www.parallax.com/tabid/214/Default.aspx
>
> For prototype work check out the system below:
>
> http://www.parallax.com/Store/Microcontrollers/BASICStampModules/tabid/134/txtSearch/28138/List/1/ProductID/123/Default.aspx?SortField=ProductName%2cProductName
>
> http://www.parallax.com/Store/Microcontrollers/SXTools/tabid/139/CategoryID/17/List/0/SortField/0/Level/a/ProductID/494/Default.aspx
>
> The programming software and a BASIC compiler are all free downloads from
> Parallax's web site.
>
> For keyboards and LCD displays look at:
>
> http://www.parallax.com/Store/Components/Other/tabid/157/CategoryID/32/List/0/SortField/0/Level/a/ProductID/194/Default.aspx
>
> http://www.parallax.com/Store/Microcontrollers/BASICStampModules/tabid/134/List/1/ProductID/55/Default.aspx?txtSearch=lcd+displays&SortField=ProductName%2cProductName
>
> Here is a whole collection of LCD displays coving a range of price points.
>
> http://www.parallax.com/Store/Accessories/Displays/tabid/159/CategoryID/34/List/0/Level/a/Default.aspx?SortField=ProductName,ProductName
>
> If you have a need to do a fair amount of floating point math then check out

> the math coprocessors for the microcontrollers.
>
> http://www.parallax.com/Store/Components/IntegratedCircuits/TimeMathCoprocessors/tabid/617/CategoryID/82/List/0/SortField/0/Level/a/ProductID/244/Default.aspx
>
> http://www.parallax.com/Store/Components/IntegratedCircuits/TimeMathCoprocessors/tabid/617/CategoryID/82/List/0/SortField/0/Level/a/ProductID/401/Default.aspx
>
> I think that you'll find everything you need available from this one source
> for the project you have in mind. I have the professional prototype board,
> floating point processor, a 2 line LCD display that plugs in to the
> prototype board and several of the SX28 chips myself. I'm still waiting to
> get the USB programming key. Right now I have to barrow my friend's serial
> version of the programming key to try out some design ideas.
>
>

Thanks all; I have been getting a lot of great suggestions. I will
whittle them down until I find the hardware I need and then order up an
evaluation board to practice on. I also note that some of the vendors
offer training nearby, so maybe I will go in for a class once I figure
out how to write a few lines of code.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 649. Re: Toroid inductor distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-06 01:00:01 UTC
From: "Leland C. Scott" <kc8ldo@arrl.net>
Message-ID: <asadnbUUM9_jMILVnZ2dnUVZ_tOtnZ2d@comcast.com>
Source record: 5236

"K7ITM" <k7itm@msn.com> wrote in message
news:fa8d3742-dd22-47a1-a2e1-a93d9e03d7d1@26g2000hsk.googlegroups.com...
>
> I had no particular interest in looking at the B-H curves, since it's
> distortion in filters I'm interested in, and that's easy for me to
> test directly.

Looking at the B-H curves will save you the trouble of testing core material that is obviously non-linear. If the B-H curve is perfectly linear there would be no distortion in the signals. Some material from just a quick look at the curves would eliminate them from consideration without the time wasted testing them.

http://www.ferroxcube.com/appl/info/3B46.pdf

>
> With respect to flux density: there seems to be a bit of a disconnect
> between what I know and what you've written. From Faraday's law of
> magnetic induction, I expect that for the same inductance with fewer
> turns, the flux density must be higher: if the inductance is the
> same, the voltage must be the same for a given current at the test
> frequency. The same voltage with fewer turns around the same cross-
> section core implies higher flux density. No?

With all things being equal that's true, however not all core material reacts the same. As you can see from the link above things are a bit more complex than they at first appear. Somebody could do a PhD thesis on the subject of designing low distortion magnetic components.

http://info.ee.surrey.ac.uk/Workshop/advice/coils/mu/

>
> So far, my tests suggest that you can't draw any conclusions one way
> or the other from only the relative permeability of the core
> material.

I think it's worth another look myself.

--
Regards,
Leland C. Scott
KC8LDO

# 650. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-06 02:20:17 UTC
From: Toby <josdek2@aol.com>
Message-ID: <BfPTj.2748$Eh7.2548@trndny01>
Source record: 5237

OK Thanks everyone for your input. Might post when I have it done.....Toby
"Toby" <josdek2@aol.com> wrote in message news:i8vTj.791$b%1.295@trndny04...
>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
>have modified this model to become a variable voltage supply but have not
>found any schematics etc for this mod. Can anyone point me in the right
>direction? Thanks!
>

## 651. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-06 23:25:50 UTC
From: jimmie68@gmail.com
Message-ID: <d52cef37-9511-41a1-8d8c-e4a044f3912d@w4g2000prd.googlegroups.com>
Source record: 5238

On May 5, 2:51 am, geek <g...@localhost.localdomain> wrote:
> On Mon, 05 May 2008 02:04:09 -0500, Ralph Mowery wrote:
>
> > "Toby" <josd...@aol.com> wrote in messagenews:i8vTj.791$b%1.295@trndny04...
> >>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
> >>have modified this model to become a variable voltage supply but have not
> >>found any schematics etc for this mod. Can anyone point me in the right
> >>direction? Thanks!
>
> > Here is the schematic for a 35, it should ve similar to the 20 except for
> > an extra pass transistor or two.
>
> >http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg
>
> I modded one of those significantly. Too long ago to remember the exact
> thing I did, but DO put that crowbar SCR anode on the collector of the
> pass transistors. If it trips as is, you kiss the current meter and
> expensive current sense resistor goodbye.
>
> Cheers,
> __
> Gregg

Ive modified a couple of these(similar) power supplies by doubling the
the number of pass transisors. In the process I also double the value
of the emitter
resistors. If they were .05 I make them .1. Seemed like a reasonable
thing to do. Any opinions?

Geez, I never thought about the SCR but you are right. While I have
added crowbar circuits and placed them before the pass transistors I
hadnt noticed that this connection on these power supplies needed to
be relocated.

Jimmie

# 652. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-07 01:21:15 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.05.07.01.21.14.173454@localhost.localdomain>
Source record: 5239

On Tue, 06 May 2008 16:25:50 -0700, jimmie68 wrote:

> On May 5, 2:51ï¿½am, geek <g...@localhost.localdomain> wrote:
>> On Mon, 05 May 2008 02:04:09 -0500, Ralph Mowery wrote:
>>
>> > "Toby" <josd...@aol.com> wrote in messagenews:i8vTj.791$b%1.295@trndny04...
>> >>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
>> >>have modified this model to become a variable voltage supply but have not
>> >>found any schematics etc for this mod. Can anyone point me in the right
>> >>direction? Thanks!
>>
>> > Here is the schematic for a 35, it should ve similar to the 20 except for
>> > an extra pass transistor or two.
>>
>> >http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg
>>
>> I modded one of those significantly. Too long ago to remember the exact
>> thing I did, but DO put that crowbar SCR anode on the collector of the
>> pass transistors. If it trips as is, you kiss the current meter and
>> expensive current sense resistor goodbye.
>>
>> Cheers,
>> __
>> Gregg
>
> Ive modified a couple of these(similar) power supplies by doubling the
> the number of pass transisors. In the process I also double the value
> of the emitter
> resistors. If they were .05 I make them .1. Seemed like a reasonable
> thing to do. Any opinions?

Yeah, go 0.1 ohms. The 0.05 ohm resistors are useless for practical
purposes.

> Geez, I never thought about the SCR but you are right. While I have
> added crowbar circuits and placed them before the pass transistors I
> hadnt noticed that this connection on these power supplies needed to
> be relocated.
>
> Jimmie

And there should be a fuse in there to blow between the filter cap and
crowbar.

The supply was actually 3rd world designed and made I swear.

Cheers,

--
Gregg

## 653. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-07 05:08:44 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <i2d224d9senqutjs95c1om23cit1ce1hae@4ax.com>
Source record: 5240

On Sun, 04 May 2008 23:51:08 -0700, geek <geek@localhost.localdomain>
wrote:

>On Mon, 05 May 2008 02:04:09 -0500, Ralph Mowery wrote:
>
>>
>> "Toby" <josdek2@aol.com> wrote in message news:i8vTj.791$b%1.295@trndny04...
>>>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
>>>have modified this model to become a variable voltage supply but have not
>>>found any schematics etc for this mod. Can anyone point me in the right
>>>direction? Thanks!
>>>
>>
>> Here is the schematic for a 35, it should ve similar to the 20 except for
>> an extra pass transistor or two.
>>
>> http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg

The diagram looks strange to me, with a direct connection from the
higher voltage driver supply (e.g. pin 12 of the 723 or collector of
Q2) to the base of the series pass transistors.

With a higher separate driver power supply the driver current should
flow through the Q2 driver transistor, through the small resistors
into the base connection of the series pass transistor. Thus in the
diagram the direct connection from the driver supply to the series
pass transistor base should be removed.

>I modded one of those significantly. Too long ago to remember the exact
>thing I did, but DO put that crowbar SCR anode on the collector of the
>pass transistors. If it trips as is, you kiss the current meter and
>expensive current sense resistor goodbye.

When using crowbars, there should be a some kind of fuse on the
feeding side, preferably immediately after the filter capacitor.

If the crowbar is before the series pass transistors, it is a good
idea to put a large reverse biased diode across the series transistors
(CR7 in the diagram), which would discharge any large capacitors on
the regulated side through the crowbar. Without the diode, the
collector side would be at 0 V after the crowbar tripped, but the
emitters could still be at +12 V due to any large capacitors on the
regulated side.

Paul OH3LWR

# 654. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-07 06:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1210140301@panix.com>
Source record: 5241
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

# 655. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-07 18:45:50 UTC
From: Toby <josdek2@aol.com>
Message-ID: <yNmUj.26$Td.18@trndny08>
Source record: 5242

After reading all these posts, the modification is likely over my head. I think I'll sell it and find a nice used variable supply. Thanks for all in the input.
"Paul Keinanen" <keinanen@sci.fi> wrote in message news:i2d224d9senqutjs95c1om23cit1ce1hae@4ax.com...
> On Sun, 04 May 2008 23:51:08 -0700, geek <geek@localhost.localdomain>
> wrote:
>
>>On Mon, 05 May 2008 02:04:09 -0500, Ralph Mowery wrote:
>>
>>>
>>> "Toby" <josdek2@aol.com> wrote in message
>>> news:i8vTj.791$b%1.295@trndny04...
>>>>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that
>>>>people
>>>>have modified this model to become a variable voltage supply but have
>>>>not
>>>>found any schematics etc for this mod. Can anyone point me in the right
>>>>direction? Thanks!
>>>>
>>>
>>> Here is the schematic for a 35, it should ve similar to the 20 except
>>> for
>>> an extra pass transistor or two.
>>>
>>> http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg
>
> The diagram looks strange to me, with a direct connection from the
> higher voltage driver supply (e.g. pin 12 of the 723 or collector of
> Q2) to the base of the series pass transistors.
>
> With a higher separate driver power supply the driver current should
> flow through the Q2 driver transistor, through the small resistors
> into the base connection of the series pass transistor. Thus in the
> diagram the direct connection from the driver supply to the series
> pass transistor base should be removed.
>
>>I modded one of those significantly. Too long ago to remember the exact
>>thing I did, but DO put that crowbar SCR anode on the collector of the
>>pass transistors. If it trips as is, you kiss the current meter and
>>expensive current sense resistor goodbye.
>
> When using crowbars, there should be a some kind of fuse on the
> feeding side, preferably immediately after the filter capacitor.

>
> If the crowbar is before the series pass transistors, it is a good
> idea to put a large reverse biased diode across the series transistors
> (CR7 in the diagram), which would discharge any large capacitors on
> the regulated side through the crowbar. Without the diode, the
> collector side would be at 0 V after the crowbar tripped, but the
> emitters could still be at +12 V due to any large capacitors on the
> regulated side.
>
> Paul OH3LWR
>
>

## 656. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-07 21:29:57 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-2D6DAD.13294907052008@netnews.worldnet.att.net>
Source record: 5243

In article <pan.2008.05.07.01.21.14.173454@localhost.localdomain>,
geek <geek@localhost.localdomain> wrote:

> And there should be a fuse in there to blow between the filter cap and
> crowbar.
>
> The supply was actually 3rd world designed and made I swear.
>
> Cheers,
> __
> Gregg

Better yet, put in a Resettable Circuit Breaker, as you can never find
the right fuse, and they ALWAYS blow at the worst possible moment.....

--
Bruce in alaska
add <path> after <fast> to reply

# 657. Re: 12BA6 -or- 12BE6 AM BC Low-Power Transmitter Help Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-08 21:05:53 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <b25c0e83-1394-47be-bfd9-a2732cc9440b@m73g2000hsh.googlegroups.com>
Source record: 5244

On May 4, 1:22 pm, ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
> geek wrote:
> > On Thu, 01 May 2008 16:55:04 -0400, Mike wrote:
>
> >> On Thu, 01 May 2008 11:56:16 +0800, Ty Unes <rive...@gmail.com> wrote:
>
> >>> I have a handful of 12BA6 and 12BE6 tubes. I also could use an AM
> >>> broadcast band transmitter for use around the house. I was wondering if
> >>> these tubes could be used for a 1 or 2 tube transmitter in the BC band
> >>> at 100mw or lower. Searching on the internet, I have found a few
> >>> circuits all using different tubes but not these.
>
> >>> I love building and troubleshooting tube circuits but I lack the
> >>> knowledge to "engineer" a circuit using these tubes. I wonder if someone
> >>> would be kind enough to offer some advice on how I could get this done.
> >>> Do you have a schematic of a circuit that would use these tubes? Is it
> >>> even possible with these tubes? Is it a fairly easy task for someone
> >>> with the knowledge to create a schematic for this?
>
> >>> Thanks for your time.
>
> >>> Ty Unes - OP, Ks.
>
> >> Take a look at this one.http://www.dogstar.dantimax.dk/tubestuf%20/amtx-1.htm
> >> The problem will be finding a crystal for an unused frequency in your area.
>
> > I have that exact transmitter here - it'll take synthesized RF OK if
> > you want to get fancy and have no xtal :-)
>
> > Cheers,
> > __
> > Gregg
>
> I built one just like that using a 14A7 loktal tube (same as 12SA7).
> Mine wasn't crystal controlled, I used an oscillator coil from a BCB set
> tuned with a 365pf variable to set the frequency, and a 2.5mh rf choke
> in the plate.  Worked great.
>
> I also went 'high power' with a 2 tube bcb transmitter using an 6F6
> oscillator modulated by another 6F6 (250v on plates).- Hide quoted text -
>
> - Show quoted text -

The 12BE6 being a mixer/converter could be a good choice for the RF oscillator and an audio stage to mix with it? 12BA6 is an RF/AF pentode (vari mu?).
Searching for circuits using 12BE6 etc.
Those tubes IIRC have 0.15 amp heaters. One way to heat them, on 120 volts AC, without using a transformer is to series the heater with a capacitor across the AC line. Since the heater voltage is such a small percentage of the total to be dropped you can for practical purposes ignore a vector diagram/calculation. (R and C vectors etc.) Viz:
120 minus 12 = 108 volts (to be dropped)
Capacitor reactance (Xc) therefore 108/0.15 = 720 ohms
Xc = 1/2pi x sq. root F x C
At 60 hertz a one mfd. cap is 'about' 2800 ohms.
So 'roughly' an AC rated 3 to 4 mfd. motor starting cap (or equivalent) will work transformer-less.

# 658. Need Connector Information for Icom IC-718 Power Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-09 05:35:15 UTC
From: "H. P. Friedrichs" <nospam@please.com>
Message-ID: <Lf2dnVnJBb0lf77VnZ2dnUVZ_hSdnZ2d@velocitywest.net>
Source record: 5245

Hello-

I recently picked up a used IC-718 real cheap. To the extent that outward appearances matter, this thing looks nearly brand-new.

However, I was not able to get the power cable... no problem, I thought, I'll just make my own.

Well, the connector on the back looks like something Molex might make, but I haven't been able to confirm that, or determine what the part number would be.

I spent some time at Molex's web site, and some time at Mouser's, and while I've found similar connector shells, nothing matches. I'm beginning to wonder if the connector was custom-made for ICOM.

Anybody know where I can find the connector I need?

Pete
AC7ZL

hpf (atsign) gainbroadband (dot) com

## 659. Re: 455Khz Coil ID Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-09 08:47:59 UTC
From: Theo <theodore.twyler@ntlworld.com>
Message-ID: <9dUUj.239$Nk5.115@newsfe15.ams2>
Source record: 5246

Answer the man - WHY do you want to build a transmitter for 455Khz?

## 660. Beam power tetrode, beam power pentode, or just a pentode?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-09 19:03:23 UTC
From: N9WOS <Don't@bug.me>
Message-ID: <oe1Vj.17063$2g1.1895@nlpi068.nbdc.sbc.com>
Source record: 5247
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

A subject that has been getting under my skin recently.

The proper name for specific tubes

It seems that people, even the manufacturers can not figure out exactly what type of tube they own, are selling, or even producing. You have various people call the exact same tube all of the above (Beam power tetrode, beam power pentode, or pentode). You have manufacturer data sheets calling it something that on actual inspection, it is not.

For example. The tubes..

6AG5

6AH6

6BC6

6CB6

6GM6

6BZ6

...(on and on)..

Second section of..

6AM8

6GH8

6U8

...(on and on)..

All of them have an electrode structure that upon close inspection that looks like/is a beam power tetrode. But the sales pages, and even the datasheets call it a pentode. The datasheets show it with a suppressor grid, where it actually has beam forming plates. What gives?.

You have a few people that have determined what they actually are by direct visual inspection, and actually call them what they are, but that is few and far between.

Is it just that the curves are close to a pentode, so the manufacturers are trying to avoid confusion to the average end user?

And as far as people calling them beam power pentode, unless they actually have three grids, and beam forming plates, then I don't consider it to be a beam power pentode.

Is it just a big international conspiracy to confuse me?

## 661. Re: Beam power tetrode, beam power pentode, or just a pentode?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-09 20:55:16 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <c8eefd51-531a-466d-a469-b5ffa4dd32eb@i76g2000hsf.googlegroups.com>
Source record: 5248
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On May 9, 3:03 pm, "N9WOS" <Do...@bug.me> wrote:
> All of them have an electrode structure that upon close inspection that
> looks like/is a beam power tetrode. But the sales pages, and even the
> datasheets call it a pentode. The datasheets show it with a suppressor grid,
> where it actually has beam forming plates. What gives?.
>
> You have a few people that have determined what they actually are by direct
> visual inspection, and actually call them what they are, but that is few and
> far between.
>
> Is it just that the curves are close to a pentode, so the manufacturers are
> trying to avoid confusion to the average end user?
>
> And as far as people calling them beam power pentode, unless they actually
> have three grids, and beam forming plates, then I don't consider it to be a
> beam power pentode.
>
> Is it just a big international conspiracy to confuse me?

RCA did the right thing: they always called their tubes "beam power tubes", completely sidestepping the tetrode vs pentode terminology.

I think RCA was careful to not call them "beam power pentodes" because some European company held European patents on power pentodes with similar beam-forming plates. I think RCA was trying really really hard to not have them identified as pentodes. Licensing and intellectual property rights to tubes' innards was something that companies were really protective of - look at the wording on the flap of any tube box up through the 70's to see some legaleze.

Although my gut feeling is that they are actually pentodes (maybe if you don't run the beam/supressor grid out to a pin it doesn't count as an electrode?) because those beam forming plates gotta be a tube element.

The ARRL (almost) always drew beam power tubes like 6146's and 807's as tetrodes and classified them as tetrodes in their tube charts. You will note that 6146's and 807's don't run the beam/suppressor grid out to its own pin but make it share the cathode pin.

Tim.

# 662. Re: Need Connector Information for Icom IC-718 Power Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-09 23:16:05 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <%W4Vj.26$_K1.1@newsfe05.lga>
Source record: 5249

I assume that the 718 uses the same 6 pin, Molex-looking plug that most recent HF radios use. Digikey has a Molex connector similar, but not quite the same. An Exacto knife can make it fit, but a better bet is to go to a place like Tower Electronics who sells these connectors as a generic HF Radio power plug.

At http://www.pl-259.com/page4.html they call it a "Kenwood, Icom & Yaesu 6-pin DC plug, with 4 pins & boot"

..

"H. P. Friedrichs" <nospam@please.com> wrote in message news:Lf2dnVnJBb0If77VnZ2dnUVZ_hSdnZ2d@velocitywest.net...
> Hello-
>
> I recently picked up a used IC-718 real cheap. To the extent that outward
> appearances matter, this thing looks nearly brand-new.
>
> However, I was not able to get the power cable... no problem, I thought,
> I'll just make my own.
>
> Well, the connector on the back looks like something Molex might make, but
> I haven't been able to confirm that, or determine what the part number
> would be.
>
> I spent some time at Molex's web site, and some time at Mouser's, and
> while I've found similar connector shells, nothing matches. I'm beginning
> to wonder if the connector was custom-made for ICOM.
>
> Anybody know where I can find the connector I need?
>
> Pete
> AC7ZL
>
> hpf (atsign) gainbroadband (dot) com

# 663. Re: 455Khz Coil ID Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-10 03:16:20 UTC
From: Ty Unes <riverty@kc.rr.com>
Message-ID: <48251384$0$30489$4c368faf@roadrunner.com>
Source record: 5250

On Fri, 09 May 2008 09:47:59 +0100, Theo wrote:

> Answer the man - WHY do you want to build a transmitter for 455Khz?

LOL - Sorry. I don't want to build a 455Khz transmitter. The reason for the post was to simply identify the coil in the picture. It has been done. Thanks.

# 664. Re: Need Connector Information for Icom IC-718 Power Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-10 13:02:11 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <I6hVj.5$oF7.0@newsfe06.lga>
Source record: 5101

"xpyttl" <xpyttl_NOSPAM@earthling.net> wrote in message
news:%W4Vj.26$_K1.1@newsfe05.lga...
> but a better bet is to go to a place like Tower Electronics

I probably should have mentioned that there is nothing special about Tower.
They happen to come to all the nearby hamfests, so I've seen their stuff.
I'm sure there is some sort of equivalent place everywhere else, just that
Tower happens to be prominent in the upper midwest. (And they are usually
at Dayton).

..

## 665. Re: Beam power tetrode, beam power pentode, or just a pentode?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-10 18:59:39 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <FfmVj.2434$C8.807@bignews2.bellsouth.net>
Source record: 5102
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Tim Shoppa wrote:
> On May 9, 3:03 pm, "N9WOS" <Do...@bug.me> wrote:
>> All of them have an electrode structure that upon close inspection that
>> looks like/is a beam power tetrode. But the sales pages, and even the
>> datasheets call it a pentode. The datasheets show it with a suppressor grid,
>> where it actually has beam forming plates. What gives?.
>>
>> You have a few people that have determined what they actually are by direct
>> visual inspection, and actually call them what they are, but that is few and
>> far between.
>>
>> Is it just that the curves are close to a pentode, so the manufacturers are
>> trying to avoid confusion to the average end user?
>>
>> And as far as people calling them beam power pentode, unless they actually
>> have three grids, and beam forming plates, then I don't consider it to be a
>> beam power pentode.
>>
>> Is it just a big international conspiracy to confuse me?
>
> RCA did the right thing: they always called their tubes "beam power
> tubes", completely sidestepping the tetrode vs pentode terminology.
>
> I think RCA was careful to not call them "beam power pentodes" because
> some European company held European patents on power pentodes with
> similar beam-forming plates. I think RCA was trying really really hard
> to not have them identified as pentodes. Licensing and intellectual
> property rights to tubes' innards was something that companies were
> really protective of - look at the wording on the flap of any tube box
> up through the 70's to see some legaleze.
>
> Although my gut feeling is that they are actually pentodes (maybe if
> you don't run the beam/supressor grid out to a pin it doesn't count as
> an electrode?) because those beam forming plates gotta be a tube
> element.
>
> The ARRL (almost) always drew beam power tubes like 6146's and 807's
> as tetrodes and classified them as tetrodes in their tube charts. You
> will note that 6146's and 807's don't run the beam/suppressor grid out
> to its own pin but make it share the cathode pin.
>
> Tim.
There are BOTH beam power pentodes and tetrodes.

RCA used to show the beam power tube with the symbol for the beam deflection plates, but later they got lazy and just drew a third grid. If you actually broke the tube open you WOULD see a 'cage' instead of a third grid.

Most beam power tubes used as AF power amps were "Pentodes", assuming you count the beam deflection 'cage' as one of the elements. Such tubes would have 5 elements making them Pentodes. It wouldn't matter if this cage was connected to the cathode or to it's own pin, it's still a pentode.

Other special beam power tubes actually did NOT have a 5th element. They had the turns of the first two grids aligned, and the spacing between the grids and the screen grid and the plate were set to minimize secondary emission. In addition, the plates had curved pockets in them designed to enhance the capture of electrons to prevent any secondary emission from ever reaching the screen grid. Tubes such as the 4-400 and 4cx250 were examples of such beam power tetrodes.

# 666. Re: Beam power tetrode, beam power pentode, or just a pentode?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-11 03:09:38 UTC
From: Mike Silva <snarflemike@yahoo.com>
Message-ID: <df2cfeaf-2b97-42c5-a351-ff71f8e8e93d@d77g2000hsb.googlegroups.com>
Source record: 5103
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On May 9, 3:03 pm, "N9WOS" <Do...@bug.me> wrote:
> A subject that has been getting under my skin recently.
>
> The proper name for specific tubes
>
> It seems that people, even the manufacturers can not figure out exactly what
> type of tube they own, are selling, or even producing. You have various
> people call the exact same tube all of the above (Beam power tetrode, beam
> power pentode, or pentode). You have manufacturer data sheets calling it
> something that on actual inspection, it is not.
>
> For example. The tubes..
>
> 6AG5
>
> 6AH6
>
> 6BC6
>
> 6CB6
>
> 6GM6
>
> 6BZ6
>
> ...(on and on)..
>
> Second section of..
>
> 6AM8
>
> 6GH8
>
> 6U8
>
> All of them have an electrode structure that upon close inspection that
> looks like/is a beam power tetrode. But the sales pages, and even the
> datasheets call it a pentode. The datasheets show it with a suppressor grid,
> where it actually has beam forming plates. What gives?.

Yeah, I was surprised when I first noticed this. Little TV IF tubes
with beam forming plates! And always drawn as a pentode and called a
pentode. Maybe somebody will make a headphone amp with 6CB6s and call

them beam power tubes. :)

> You have a few people that have determined what they actually are by direct
> visual inspection, and actually call them what they are, but that is few and
> far between.
>
> Is it just that the curves are close to a pentode, so the manufacturers are
> trying to avoid confusion to the average end user?

Well to me, a pentode is just a tube with 5 elements. Cathode, plate
and three something-elses. Historically those were three grids, but I
don't know why the 3rd element has to be a grid.
>
> And as far as people calling them beam power pentode, unless they actually
> have three grids, and beam forming plates, then I don't consider it to be a
> beam power pentode.

I think the descriptor "beam power" is similar to "sharp cutoff" or
"remote cutoff". A remote cutoff pentode isn't a pentode with an
extra element, but a pentode about which the description gives
additional information. Same with beam power pentode. But "beam
power tetrode" is much more common. So just listen up to the "beam"
word and then ignore the rest.
>
> Is it just a big international conspiracy to confuse me?

Hadn't thought about that before, but I think you're probably
right. :)

## 667. Re: Beam power tetrode, beam power pentode, or just a pentode?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-11 16:25:15 UTC
From: N9WOS <Don't@bug.me>
Message-ID: <S5FVj.3280$J16.1048@newssvr23.news.prodigy.net>
Source record: 5104
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Thanks for everyone's replies.

>Hadn't thought about that before, but I think you're probably
right. :)

As I have heard people say.

"just because someone has an irrational fear that everyone is out to get
him, doesn't mean that everyone isn't out to get him."

## 668. noise source question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-12 10:16:10 UTC
From: francesco.messineo@gmail.com
Message-ID: <7f9915ae-cf02-41be-a37f-f81c42625659@34g2000hsh.googlegroups.com>
Source record: 5105

Hello,

I'm willing to make a noise source from an UHF transistor (B-E
junction reverse polarized like a zener) and I was wondering if it's
ok to use the output attenuator as part of the resistor network for
the DC bias of the transistor (or zener). I'd probably look at the
arrl handbook if I had it ;-)
Thanks
Francesco IZ8DWF

# 669. Re: noise source question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-12 22:10:09 UTC
From: gwhite@alum.mit.edu
Message-ID: <tOadnaFFUcvdXbXVnZ2dnUVZ_gqdnZ2d@rcn.net>
Source record: 5106

Keywords:
In article <7f9915ae-cf02-41be-a37f-f81c42625659@34g2000hsh.googlegroups.com>,
francesco.messineo@gmail.com wrote:
>Hello,
>
>I'm willing to make a noise source from an UHF transistor (B-E
>junction reverse polarized like a zener) and I was wondering if it's
>ok to use the output attenuator as part of the resistor network for
>the DC bias of the transistor (or zener). I'd probably look at the
>arrl handbook if I had it ;-)

Depending on how you do it, the noise can degrade over time. You are
better off using a diode. My recollection is that a true zener (around
3V) works best. I worked on an HP instrument that was originally
designed with a reverse biased transistor as a noise source. The noise
spectrum degraded over time and caused a lot of warranty returns. I
replaced it with a diode, and all was well. This was 30 years ago, so I
don't remember the details. This was for a low frequency noise source,
and things may behave differently for an RF source.

Doug White

## 670. Re: noise source question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-13 00:17:02 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <4828DDFE.4050404@NETTALLY.COM>
Source record: 5107

francesco.messineo@gmail.com wrote:
> Hello,
>
> I'm willing to make a noise source from an UHF transistor (B-E
> junction reverse polarized like a zener) and I was wondering if it's
> ok to use the output attenuator as part of the resistor network for
> the DC bias of the transistor (or zener). I'd probably look at the
> arrl handbook if I had it ;-)
> Thanks
> Francesco IZ8DWF

I would think that your biasing of the resistor network would create some amount of noise which of course would not be attenuated to the same extent as the semiconductor. But then again it may be negligeable.

Why not build it and try it out?

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 671. ** FLEA at MIT ** Sunday May 18th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-13 07:03:30 UTC
From: w1gsl@mit.edu
Message-ID: <48293d42$0$304$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 5108
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.info

This coming Sunday....
the Season's First.... FLEA at MIT

**********
**********

Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

*** !!!! In our Traditional GARAGE and the adjacent lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

<FF>
********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday May 18th 2008
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held on Albany between Mass Ave and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

SEASON PASS + Advance Seller Discount

A sellers discount season pass is available which
offers a 30% discount. By prepaying you get a
discount and earlier admission. See the registration form.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
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Harvard Wireless Club (W1AF)

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**********
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
**********

# 672. Re: noise source question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-13 07:57:26 UTC
From: francesco.messineo@gmail.com
Message-ID: <06de9ca7-6d71-4abc-86b2-19a2ee304315@m45g2000hsb.googlegroups.com>
Source record: 5109

On 13 Mag, 02:17, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
> francesco.messi...@gmail.com wrote:
> > Hello,
>
> > I'm willing to make a noise source from an UHF transistor (B-E
> > junction reverse polarized like a zener) and I was wondering if it's
> > ok to use the output attenuator as part of the resistor network for
> > the DC bias of the transistor (or zener). I'd probably look at the
> > arrl handbook if I had it ;-)
> > Thanks
> > Francesco IZ8DWF
>
> I would think that your biasing of the resistor network would create
> some amount of noise which of course would not be attenuated to the same
> extent as the semiconductor. But then again it may be negligeable.
>

well, indeed it would raise the termal noise of the resistor network,
but we are talking about less than 1 mA currents and the noise from
the source will be by far superior. I was more concerned about adding
some DC to the output, I might just try building it, but I was trying
to be sure about possible implications before beeing happy with a
result :-)

Thanks
Francesco IZ8DWF

## 673. Re: noise source question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-13 16:49:06 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <wCjWj.2744$Kk3.2720@bignews9.bellsouth.net>
Source record: 5110

francesco.messineo@gmail.com wrote:
> On 13 Mag, 02:17, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
>> francesco.messi...@gmail.com wrote:
>>> Hello,
>>> I'm willing to make a noise source from an UHF transistor (B-E
>>> junction reverse polarized like a zener) and I was wondering if it's
>>> ok to use the output attenuator as part of the resistor network for
>>> the DC bias of the transistor (or zener). I'd probably look at the
>>> arrl handbook if I had it ;-)
>>> Thanks
>>> Francesco IZ8DWF
>> I would think that your biasing of the resistor network would create
>> some amount of noise which of course would not be attenuated to the same
>> extent as the semiconductor. But then again it may be negligeable.
>>
>
> well, indeed it would raise the termal noise of the resistor network,
> but we are talking about less than 1 mA currents and the noise from
> the source will be by far superior. I was more concerned about adding
> some DC to the output, I might just try building it, but I was trying
> to be sure about possible implications before beeing happy with a
> result :-)
>
> Thanks
> Francesco IZ8DWF

I am not sure why you would want to do this, your parts count would at
most be reduced by one resistor, you still need to have a DC blocking
capacitor somewhere. Or are you using a bias "T" that is already part of
the set up?

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 674. Re: noise source question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-13 18:53:22 UTC
From: Jimmie D <GFENDER@carolina.rr.com>
Message-ID: <4829e393$0$7726$4c368faf@roadrunner.com>
Source record: 5111

"RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
news:wCjWj.2744$Kk3.2720@bignews9.bellsouth.net...
> francesco.messineo@gmail.com wrote:
>> On 13 Mag, 02:17, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
>>> francesco.messi...@gmail.com wrote:
>>>> Hello,
>>>> I'm willing to make a noise source from an UHF transistor (B-E
>>>> junction reverse polarized like a zener) and I was wondering if it's
>>>> ok to use the output attenuator as part of the resistor network for
>>>> the DC bias of the transistor (or zener). I'd probably look at the
>>>> arrl handbook if I had it ;-)
>>>> Thanks
>>>> Francesco IZ8DWF
>>> I would think that your biasing of the resistor network would create
>>> some amount of noise which of course would not be attenuated to the same
>>> extent as the semiconductor. But then again it may be negligeable.
>>>
>>
>> well, indeed it would raise the termal noise of the resistor network,
>> but we are talking about less than 1 mA currents and the noise from
>> the source will be by far superior. I was more concerned about adding
>> some DC to the output, I might just try building it, but I was trying
>> to be sure about possible implications before beeing happy with a
>> result :-)
>>
>> Thanks
>> Francesco IZ8DWF
>
> I am not sure why you would want to do this, your parts count would at
> most be reduced by one resistor, you still need to have a DC blocking
> capacitor somewhere. Or are you using a bias "T" that is already part of
> the set up?
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"
>
> "Treason doth never prosper: what's the reason?
> For if it prosper, none dare call it treason."
>
> "Follow The Money" ;-P

I built a noise source several years ago biasing the doide through the potentiometer I was using for a level control and taking the noise off of the wiper. The potentiometer was noisier than the diode.
Biased carbon resistors be pretty noisy so I reccomend using metal film resistors.

Jimmie

## 675. Quake

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-13 19:47:17 UTC
From: Howard W3CQH <hsgorden@comcast.net>
Message-ID: <HfSdnTtLJ_nIbbTVnZ2dnUVZ_hSdnZ2d@comcast.com>
Source record: 5112

Just received this through a ARES reflector
==========

""Strong earthquake hits China, all ham radio operators stand by PLEASE HELP TO SPREAD THE FOLLOWING MESSAGE

Strong earthquake hits China, all ham radio operators stand by A Magnitude 7.8 earthquake hits Sichuan, China on Monday, May 12, 2008 at 06:28:04 UTC. Casualties and loss unknown up to now. According to Chinese Radio Sports Association, 14.270Mhz, 7.050 and 7.060 Mhz are preserved for amateur radio emergency service in the rescue. Please spread this message as far as you can and keep the frequencies clean for emergency use. Thank you.

---
Yesterday, 05:57 PM
BG8AAS from Chengdu, Sichuan reported that local UHF repeater survived in the disaster. It keeps functioning from the 1st minute and more than 200 local radio hams are now on that repeater. A group of hams from Chengdu has headed for Wenchuan, the center of the quake, trying to setup emergency communication services there.

BA8AB, also from Chengdu, Sichuan, is active on the 40m emergency frequency. Up to now, no further information available from the center zone of the quake. There are a few radio amateurs there, but all of the communications have been cut out, including amateur radio.
---
Yesterday, 06:58 PM
Update

According to BG8AAS, local UHF repeater in Chengdu keeps busy running after the quake. It helps to direct social vehicles to transport the wounded from Dujiangyan, Beichuan, and other regions. Another UHF repeater also starts its working in Mianyan, supported by generators.
However, they are going to face a shortage of gas.

Damage in Chengdu remains in the lowest level, but the situation is very very bad in the counties around. A few towns are said to be destroyed completely. More than 7000 died in the town of Beichuan. Casualties in several other towns are still unknown and not counted in the published numbers.

It is a long and sad day.
---
Today, 08:31 AM
Your attention please! 14.270Mhz is now reserved for ARES in 5.12 earth quake in Sichuan, China. Please help to keep this frequency clear.

A group of radio amateurs is now transmitting from Wenchuan, the center of quake. Its signal is reported to be very weak. They tried to keep communication with BY8AA in Chengdu, seeking for all resources needed. During a contact finished a few minutes ago, they were asking for raincoats, water, tents, and outdoor living facilities.

PLEASE HELP TO FORWARD THIS MESSAGE TO ALL RELEVANT FORUMS, MAILING LISTS, AND NEWS RESOURCES. MEANWHILE, KEEP THE ABOVE FREQUENCY CLEAN FOR EMERGENCY COMMUNICATION.

Michael Chen, BD5RV/4""

## 676. Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-15 21:38:05 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0805151732540.20677@panix2.panix.com>
Source record: 5113

We had a thread recently on Astron power supplies and I thought I'd mention that I have an RS-35A (35 amps intermittent) for VHF brick amplifiers (main use) and I've had it for some 20 years. Recently, the PS has started to "crowbar" off on me (voltage goes to zero) and not even with high currents (maybe around 15 amps or so) and have to shut it off, wait a few seconds, and turn it back on.

I also had another different regulated fairly high current DC PS go bad long ago, in a similar way.

I'm wondering how many others of you have seen defective operation, sooner or later, or other deterioration in your high current regulated DC supplies?

And, if the overvoltage crowbar craps out, it blows up your rig? I'm thinking of going exclusively back to deep cycle marine batteries, again.

## 677. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-15 23:47:40 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <BY3Xj.117027$Ft5.16628@newsfe15.lga>
Source record: 5114

"A" <arthures@panix.com> wrote in message
news:Pine.NEB.4.64.0805151732540.20677@panix2.panix.com...
>
> We had a thread recently on Astron power supplies and I thought I'd
> mention that I have an RS-35A (35 amps intermittent) for VHF brick
> amplifiers (main use) and I've had it for some 20 years. Recently, the PS
> has started to "crowbar" off on me (voltage goes to zero) and not even
> with high currents (maybe around 15 amps or so) and have to shut it off,
> wait a few seconds, and turn it back on.
>
> I also had another different regulated fairly high current DC PS go bad
> long ago, in a similar way.
>
> I'm wondering how many others of you have seen defective operation, sooner
> or later, or other deterioration in your high current regulated DC
> supplies?
>
> And, if the overvoltage crowbar craps out, it blows up your rig? I'm
> thinking of going exclusively back to deep cycle marine batteries, again.
>

Sometimes adding a .1 or .22 uF cap on the gate of the SCR to ground
will stop nuisance crowbars. Some Astrons are more sensitive than others
in this regard. We had a similar problem with a few 50 amp Astrons in
repeater service.

Pete

## 678. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-16 10:39:04 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <seCdncWUuMX6-bDVnZ2dneKdnZydnZ2d@pipex.net>
Source record: 5115

> I'm wondering how many others of you have seen defective operation,
> sooner or later, or other deterioration in your high current regulated
> DC supplies?
>
> And, if the overvoltage crowbar craps out, it blows up your rig? I'm
> thinking of going exclusively back to deep cycle marine batteries, again.
==========
The crowbar is there to NOT blow up your equipment.

However operation of a crowbar should blow a fuse fitted 'upstream' of
the pass transistors. As already explained earlier in this thread ,the
crowbar should also be fitted 'upstream the pass transistors (but
'downstream' the fuse , while sensing the output voltage .

If the Astron voltage regulator would be suspect I would recommend a
very simple circuit with a 7812 voltage regulator and a PNP transistor
,its output 'steering' the pass transistors .

Ref : Experimental Methods in RF Design , by W7ZOI-KK7B- W7PUA
page 1.15

Instead of the 3 legged 7812 you can also use the similar LM317 enabling
output voltage adjustment
After all this is a homebrew NG

Frank GM0CSZ / KN6WH

## 679. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-16 21:08:09 UTC
From: You <you@shadow.orgs>
Message-ID: <you-647FF8.13080416052008@netnews.worldnet.att.net>
Source record: 5116

In article <seCdncWUuMX6-bDVnZ2dneKdnZydnZ2d@pipex.net>,
Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote:

> The crowbar is there to NOT blow up your equipment.
>
> However operation of a crowbar should blow a fuse fitted 'upstream' of
> the pass transistors. As already explained earlier in this thread ,the
> crowbar should also be fitted 'upstream the pass transistors (but
> 'downstream' the fuse , while sensing the output voltage .
>
> If the Astron voltage regulator would be suspect I would recommend a
> very simple circuit with a 7812 voltage regulator and a PNP transistor
> ,its output 'steering' the pass transistors .
>
> Ref : Experimental Methods in RF Design , by W7ZOI-KK7B- W7PUA
> page 1.15
>
>
> Instead of the 3 legged 7812 you can also use the similar LM317 enabling
> output voltage adjustment
> After all this is a homebrew NG

and if your really smart, you will dump the fuse, and replace it with
a Resettable Circuit Breaker, because Murphy's Law states the Crowbar
will do it's thing, ALWAYS at the worst possible moment, and the
appropriate replacement fuse will be a 5 miles drive away, at the
closest. You mileage may vary.....

## 680. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-16 22:50:59 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <vdoXj.86631$y05.44183@newsfe22.lga>
Source record: 5117

Unless there are other major failures, the crowbar simply puts the Astron supply into current limiting. I've had 50-amp supplies running in current limiting for days because of noise-induced SCR firing.

If the supply crowbars because a pass transistor shorted, then the crowbar location becomes a rather mute matter; and involves a bit more than fuse changing.

Pete

## 681. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-17 00:48:17 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0805162043080.14434@panix2.panix.com>
Source record: 5118

On Fri, 16 May 2008, You wrote:

> In article <seCdncWUuMX6-bDVnZ2dneKdnZydnZ2d@pipex.net>,
> Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote:
>
>> The crowbar is there to NOT blow up your equipment.
>>
>> However operation of a crowbar should blow a fuse fitted 'upstream' of
>> the pass transistors. As already explained earlier in this thread ,the
>> crowbar should also be fitted 'upstream the pass transistors (but
>> 'downstream' the fuse , while sensing the output voltage .
>>
>> If the Astron voltage regulator would be suspect I would recommend a
>> very simple circuit with a 7812 voltage regulator and a PNP transistor
>> ,its output 'steering' the pass transistors .
>>
>> Ref : Experimental Methods in RF Design , by W7ZOI-KK7B- W7PUA
>> page 1.15
>>
>>
>> Instead of the 3 legged 7812 you can also use the similar LM317 enabling
>> output voltage adjustment
>> After all this is a homebrew NG
>
> and if your really smart, you will dump the fuse, and replace it with
> a Resettable Circuit Breaker, because Murphy's Law states the Crowbar
> will do it's thing, ALWAYS at the worst possible moment, and the
> appropriate replacement fuse will be a 5 miles drive away, at the
> closest. You mileage may vary.....
>

Just to add, I've had a lot of problems with high amperage fuses, too, in brick amplifiers and power supplies and VHF rigs with those "sexy" in-line fuse holders. Seems like the connections become corroded, resistance goes up enough that the current induces drop voltage high enough to do significant heating...etc... Sometimes I've removed those fuses completely, even in one brick amplifier (25-30 amps for a 3AG fuse!!) just soldered a jumper wire across the &%$& fuse holder. Yeah, I know, bad idea. But, all my problems went away.

Also, I had circuit breakers go bad, too. Brand new ones. Expensive ones.

KIS = keep it simple.

## 682. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-17 00:52:50 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0805162049100.14434@panix2.panix.com>
Source record: 5119

On Fri, 16 May 2008, Tio Pedro wrote:

> Unless there are other major failures, the crowbar simply
> puts the Astron supply into current limiting. I've had
> 50-amp supplies running in current limiting for days
> because of noise-induced SCR firing.
>
> If the supply crowbars because a pass transistor shorted,
> then the crowbar location becomes a rather mute matter;
> and involves a bit more than fuse changing.
>
> Pete
>
>
>

Well, I've had a number of occurrences where, PTT on 2 M FM rig at current well below current ratings and the output voltage goes to 0.5 or less and had to off-on cycle the main switch. Makes me mad. Gotta get back to that deep cycle 12 v battery.... They always go bad very very very slowly. Great when there is a power failure, too! ;-)

Thanks to the rest of you guys that made comments, too.

## 683. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-17 01:37:05 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrng2sdm1.18qh.bit-bucket@shell.config.com>
Source record: 5120

On Fri, 16 May 2008 20:48:17 -0400, A wrote:
> Just to add, I've had a lot of problems with high amperage fuses, too, in
> brick amplifiers and power supplies and VHF rigs with those "sexy" in-line
> fuse holders. Seems like the connections become corroded, resistance goes
> up enough that the current induces drop voltage high enough to do
> significant heating...etc... Sometimes I've removed those fuses
> completely, even in one brick amplifier (25-30 amps for a 3AG fuse!!) just
> soldered a jumper wire across the &%$& fuse holder. Yeah, I know, bad
> idea. But, all my problems went away.

If you are referring to those cheap, butt-contact, twist-and-lock
cylindrical fuse holders, I'll agree! They are problematic in many
instances, but especially so in high current situations.

I had no end of problems with the from-the-factory in-line fuse holder
with my IC-706. The IC-706 is a poor enough performer at voltages under
about 12.599999VDC, and the voltage drop across the fuse holder was
often enough to drop the volts into the rig even lower than that.

(Don't even get me started about the use of a butt-contact cigarette
lighter "power plug".)

I now replace that style of fuse/fuse holder with the automotive,
"horse-shoe" shaped style. (I'm sure there must be a more 'formal' name
for them.) You can even get them with weather proof caps for under-the-
hood applications.

And, for mobile operations, you can find replacement fuses up and down
the hiways and byways A WHOLE LOT EASIER than you can find the old
cylindrical fuses.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

## 684. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-17 05:45:30 UTC
From: K4ERG <k4erg@arrl.net>
Message-ID: <EguXj.21524$C8.10688@bignews2.bellsouth.net>
Source record: 5121

"A" <arthures@panix.com> wrote in message
news:Pine.NEB.4.64.0805162049100.14434@panix2.panix.com...
>
>
> On Fri, 16 May 2008, Tio Pedro wrote:
>
>> Unless there are other major failures, the crowbar simply
>> puts the Astron supply into current limiting. I've had
>> 50-amp supplies running in current limiting for days
>> because of noise-induced SCR firing.
>>
>> If the supply crowbars because a pass transistor shorted,
>> then the crowbar location becomes a rather mute matter;
>> and involves a bit more than fuse changing.
>>
>> Pete
>>
>>
>>
>
> Well, I've had a number of occurrences where, PTT on 2 M FM rig at current
> well below current ratings and the output voltage goes to 0.5 or less and
> had to off-on cycle the main switch. Makes me mad. Gotta get back to that
> deep cycle 12 v battery.... They always go bad very very very slowly.
> Great when there is a power failure, too! ;-)
>
> Thanks to the rest of you guys that made comments, too.

You have stray RF in the shack. Check for intermittent connections to your
antenna. Most likely a bad shield connection inside one of the PL259
commuters or a bad ground connection.

## 685. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-17 05:51:21 UTC
From: K4ERG <k4erg@arrl.net>
Message-ID: <7muXj.21527$C8.2030@bignews2.bellsouth.net>
Source record: 5122

"K4ERG" <k4erg@arrl.net> wrote in message
news:EguXj.21524$C8.10688@bignews2.bellsouth.net...
>
> "A" <arthures@panix.com> wrote in message
> news:Pine.NEB.4.64.0805162049100.14434@panix2.panix.com...
>>
>>
>> On Fri, 16 May 2008, Tio Pedro wrote:
>>
>>> Unless there are other major failures, the crowbar simply
>>> puts the Astron supply into current limiting. I've had
>>> 50-amp supplies running in current limiting for days
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>> back to that deep cycle 12 v battery.... They always go bad very very
>> very slowly. Great when there is a power failure, too! ;-)
>>
>> Thanks to the rest of you guys that made comments, too.

You have stray RF in the shack. Check for intermittent connections to your
antenna. Most likely a bad shield connection inside one of the PL259
connectors or a bad ground connection.

Stupid spell checker!

## 686. tubular immersion element

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-19 10:07:29 UTC
From: Håken Hveem <krbjhvee-antispam@online.no>
Message-ID: <vOWdnfsidbL_zKzV4p2dnAA@telenor.com>
Source record: 5123
Cross-posted to: alt.beer.home-brewing,rec.radio.amateur.homebrew

Does anyone know where I can obtain a 240 VAC, 3000-4000 W low watt density ( 20wcm2) tubular immersion element made of 304 or 316 stainless steel or inconel. The maximum outer diameter is 18 inches.

http://wantitnow.ebay.com/tubular-Heater-element_W0QQadidZ330227418862

krbjhvee at online.no

## 687. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-19 11:39:09 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0805190738160.22787@panix1.panix.com>
Source record: 5124

On Sat, 17 May 2008, K4ERG wrote:

>
> "A" <arthures@panix.com> wrote in message
> news:Pine.NEB.4.64.0805162049100.14434@panix2.panix.com...
>>
>>
>> On Fri, 16 May 2008, Tio Pedro wrote:
>>
>>> Unless there are other major failures, the crowbar simply
>>> puts the Astron supply into current limiting. I've had
>>> 50-amp supplies running in current limiting for days
>>> because of noise-induced SCR firing.
>>>
>>> If the supply crowbars because a pass transistor shorted,
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>>>
>>>
>>>
>>
>> Well, I've had a number of occurrences where, PTT on 2 M FM rig at current
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>> had to off-on cycle the main switch. Makes me mad. Gotta get back to that
>> deep cycle 12 v battery.... They always go bad very very very slowly.
>> Great when there is a power failure, too! ;-)
>>
>> Thanks to the rest of you guys that made comments, too.
>
> You have stray RF in the shack.

Not likely if you've been running the gear for years and didn't touch
anything. see my response to your second post.

Check for intermittent connections to your
> antenna. Most likely a bad shield connection inside one of the PL259
> commuters or a bad ground connection.
>
>
>

## 688. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-19 11:40:43 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0805190739210.22787@panix1.panix.com>
Source record: 5125

On Sat, 17 May 2008, K4ERG wrote:

>
> "K4ERG" <k4erg@arrl.net> wrote in message
> news:EguXj.21524$C8.10688@bignews2.bellsouth.net...
>>
>> "A" <arthures@panix.com> wrote in message
>> news:Pine.NEB.4.64.0805162049100.14434@panix2.panix.com...
>>>
>>>
>>> On Fri, 16 May 2008, Tio Pedro wrote:
>>>
>>>> Unless there are other major failures, the crowbar simply
>>>> puts the Astron supply into current limiting. I've had
>>>> 50-amp supplies running in current limiting for days
>>>> because of noise-induced SCR firing.
>>>>
>>>> If the supply crowbars because a pass transistor shorted,
>>>> then the crowbar location becomes a rather mute matter;
>>>> and involves a bit more than fuse changing.
>>>>
>>>> Pete
>>>>
>>>>
>>>>
>>>
>>> Well, I've had a number of occurrences where, PTT on 2 M FM rig at
>>> current well below current ratings and the output voltage goes to 0.5 or
>>> less and had to off-on cycle the main switch. Makes me mad. Gotta get
>>> back to that deep cycle 12 v battery.... They always go bad very very
>>> very slowly. Great when there is a power failure, too! ;-)
>>>
>>> Thanks to the rest of you guys that made comments, too.
>
> You have stray RF in the shack. Check for intermittent connections to your
> antenna. Most likely a bad shield connection inside one of the PL259
> connectors or a bad ground connection.
>
> Stupid spell checker!
>

Not my idea but it sounded good when I heard it: "Life's too short for
spell checkers"

Ham radio advertisement many years ago: "Life's too short for QRP" and it was for a big amplifier.

;-)

>

## 689. Re: looking for construction article

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-20 02:56:38 UTC
From: "Tom C." <tecoates@comcast.net>
Message-ID: <LuadnbfFU9F7oK_VnZ2dnUVZ_rninZ2d@comcast.com>
Source record: 5126

Something like that was offered as a product on the back pages of computer magazines several years ago.

It would be easy to make, if you could tolerate a really large wall wart.

Tom

"Howard W3CQH" <hsgorden@comcast.net> wrote in message news:Fqadnefe5YmJo4fVnZ2dnUVZ_jSdnZ2d@comcast.com...
> Looking for some information -
>
> A while back - someone put together an article - whereas they made single
> board computer in a keybd - with sound card & either usb or serial ports and
> port for external Hard drive & screen.. and it ran on XP..
>
> I want to use this on HF/VHF portable operation!
>
> Due to a system crash a bit ago I seemed to have misplaced the construction
> article..
>
> Anybody happen to have a copy?
>
> 73's
>
>
>

## 690. Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-21 07:00:40 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <4833C898.2090302@nosspam.activ8.net.au>
Source record: 5127

Hello all,
I am trying to muliply a 72MHz crystal oscillator to 1296 MHz. My first approach was to just make a series of X2 or X3 transistor mulipliers to get the require X18 multiplication fact. However, I have found two pieces of equipment in the junk box which just use diode multipliers. One is an old Electrophone UHF CB radio which multiplies the crystal oscillator by 17 (I think, from memory)then uses helical resonators to filter the desired harmonic. The same approach is used in an old King aircraft transponder where the 138 MHz crystal is multiplied to 960 MHz with just a diode and uses the first two stages of an interdigital mixer to get rid of unwanted harmonics.
So, the question is, which is the better approach? I just want a reasonably clean signal source to test a 1296 MHz down-converter. The diode approach seems simpler but is it likely to contain more spurious signals than a transistor multiplier chain?
Alan
VK2ADB

# 691. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-21 15:29:25 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0805211121500.11429@darkstar.example.org>
Source record: 5128

On Wed, 21 May 2008, Alan Peake wrote:

> Hello all,
> I am trying to muliply a 72MHz crystal oscillator to 1296 MHz. My first
> approach was to just make a series of X2 or X3 transistor mulipliers to get
> the require X18 multiplication fact. However, I have found two pieces of
> equipment in the junk box which just use diode multipliers. One is an old
> Electrophone UHF CB radio which multiplies the crystal oscillator by 17 (I
> think, from memory)then uses helical resonators to filter the desired
> harmonic. The same approach is used in an old King aircraft transponder where
> the 138 MHz crystal is multiplied to 960 MHz with just a diode and uses the
> first two stages of an interdigital mixer to get rid of unwanted harmonics.
> So, the question is, which is the better approach? I just want a reasonably
> clean signal source to test a 1296 MHz down-converter.
> The diode approach seems simpler but is it likely to contain more spurious
> signals than a transistor multiplier chain?
> Alan
> VK2ADB
>
>
I don't know, and one thing to remember is that what was done years ago
may no longer be the solution because other things have come along.

A single stage of multiplication is of course simplest. But, if you
do it in one step, the signal may be so weak that you need stages of
amplification at the ultimate frequency. Once upon a time, frequency
limits may have made that unfeasible.

Also, if you have one stage that basically generates harmonics, and
then you expect to pick off the desired frequency, that filtering
may need to be much better than multiple stages. If you start
with a low enough crystal frequency, the next harmonic may be too close
and some of it will get through the filter on the ultimate frequency.
If you have a string of multipliers, each does filtering so the next
stage only has to deal with filtering out a relatively high frequency.

Note that your two examples aren't comparable. The first example you
say multiplies by 17, while the second only multiplies by 6. Even in
the old days, it wasn't uncommon to see a jump like 6, but something
like 17 was less common.

The real trick seems to be to start with as high a frequency as possible.
Then the multiplication needed is limited, and it's far easier to filter
out harmonics from a higher frequency crystal than a lower one.

Michael VE2BVW

## 692. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-21 16:57:26 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrng38l3m.19e4.bit-bucket@shell.config.com>
Source record: 5129

On Wed, 21 May 2008 17:00:40 +1000, Alan Peake wrote:
> Hello all,
> I am trying to muliply a 72MHz crystal oscillator to 1296 MHz. My
> first approach was to just make a series of X2 or X3 transistor
> mulipliers to get the require X18 multiplication fact. However, I have
> found two pieces of equipment in the junk box which just use diode
> multipliers. One is an old Electrophone UHF CB radio which multiplies
> the crystal oscillator by 17 (I think, from memory)then uses helical
> resonators to filter the desired harmonic. The same approach is used in
> an old King aircraft transponder where the 138 MHz crystal is multiplied
> to 960 MHz with just a diode and uses the first two stages of an
> interdigital mixer to get rid of unwanted harmonics.

> So, the question is, which is the better approach?

Are you building tens of thousands like Electrophone and King did?
There was more than 'good' engineering involved with those boxes.
The bean counters were all over it, too -- I'm sure.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

# 693. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-21 18:57:57 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <far8341hd3kbq7iemv503crg10v6s6eiug@4ax.com>
Source record: 5130

On Wed, 21 May 2008 17:00:40 +1000, Alan Peake
<adpeake@nosspam.activ8.net.au> wrote:

>However, I have
>found two pieces of equipment in the junk box which just use diode
>multipliers. One is an old Electrophone UHF CB radio which multiplies
>the crystal oscillator by 17 (I think, from memory)then uses helical
>resonators to filter the desired harmonic.

Sounds like a step recovery diode (SRD) multiplier, which generates a
very broad spectrum. In extreme multiplication situations a tunable
harmonic analyser could be used to select out a single harmonic from
the broad SRD spectrum (mix down with a VFO, filter with a crystal
filter with bandwidth comparable to the fundamental and mix up the
filtered harmonic up to the original frequency using the _same_ VFO,
effectively canceling out any VFO drift).

However, since there have been prescalers available for quite a while
for satellite-TV indoor units, which are capable of at least 2 GHz,
why not use a PLL. Put a VCO at 1296 MHz, use a divide it by 64 using
the prescaler and phase lock it to a 20.25 MHz crystal. With such high
reference frequency, the loop filter can be quite broad, greatly
attenuating the VCO phase noise.

Paul OH3LWR

## 694. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-21 23:37:04 UTC
From: "Dr. Grok" <DRGrok@munged.net>
Message-ID: <Am2Zj.2292$ju1.2251@trndny06>
Source record: 5131

You could consider another approach -- phase locking a 1296 MHz
oscillator to your 72 MHz xtal.

Dr. G.

Alan Peake <adpeake@nosspam.activ8.net.au> wrote in news:4833C898.2090302
@nosspam.activ8.net.au:

> Hello all,
> I am trying to muliply a 72MHz crystal oscillator to 1296 MHz. My
> first approach was to just make a series of X2 or X3 transistor
> mulipliers to get the require X18 multiplication fact. However, I have
> found two pieces of equipment in the junk box which just use diode
> multipliers. One is an old Electrophone UHF CB radio which multiplies
> the crystal oscillator by 17 (I think, from memory)then uses helical
> resonators to filter the desired harmonic. The same approach is used in
> an old King aircraft transponder where the 138 MHz crystal is
multiplied
> to 960 MHz with just a diode and uses the first two stages of an
> interdigital mixer to get rid of unwanted harmonics.
> So, the question is, which is the better approach? I just want a
> reasonably clean signal source to test a 1296 MHz down-converter.
> The diode approach seems simpler but is it likely to contain more
> spurious signals than a transistor multiplier chain?
> Alan
> VK2ADB
>
>

## 695. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 01:15:00 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <ZR3Zj.50$bx6.34@newsfe07.lga>
Source record: 5132

Is there some magic to using the 72 MHz oscillator? Gigahertz synthesizers are cheap and simple these days. Back in the bad old days multiplication was the cheap and easy way to get stable high frequencies. Today, that helical resonator would probably buy the synthesizer chip and associated support circuitry, and you needn't fiddle around with stage after stage.

..

"Alan Peake" <adpeake@nosspam.activ8.net.au> wrote in message news:4833C898.2090302@nosspam.activ8.net.au...
> Hello all,
> I am trying to muliply a 72MHz crystal oscillator to 1296 MHz. My
> first approach was to just make a series of X2 or X3 transistor mulipliers
> to get the require X18 multiplication fact. However, I have found two
> pieces of equipment in the junk box which just use diode multipliers. One
> is an old Electrophone UHF CB radio which multiplies the crystal
> oscillator by 17 (I think, from memory)then uses helical resonators to
> filter the desired harmonic. The same approach is used in an old King
> aircraft transponder where the 138 MHz crystal is multiplied to 960 MHz
> with just a diode and uses the first two stages of an interdigital mixer
> to get rid of unwanted harmonics.
> So, the question is, which is the better approach? I just want a
> reasonably clean signal source to test a 1296 MHz down-converter.
> The diode approach seems simpler but is it likely to contain more spurious
> signals than a transistor multiplier chain?
> Alan
> VK2ADB
>

## 696. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 02:03:03 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <4834D457.4080909@nosspam.activ8.net.au>
Source record: 5133

xpyttl wrote:
> Is there some magic to using the 72 MHz oscillator? Gigahertz synthesizers
> are cheap and simple these days. Back in the bad old days multiplication
> was the cheap and easy way to get stable high frequencies. Today, that
> helical resonator would probably buy the synthesizer chip and associated
> support circuitry, and you needn't fiddle around with stage after stage.

I just wanted to do it with existing bits.
Alan

## 697. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 02:17:40 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <4834D7C4.1050904@nosspam.activ8.net.au>
Source record: 5134

Michael Black wrote:
>
> I don't know, and one thing to remember is that what was done years ago
> may no longer be the solution because other things have come along.
>
Yes, as others have pointed out, a VCO and PLL is a better solution.

> A single stage of multiplication is of course simplest. But, if you
> do it in one step, the signal may be so weak that you need stages of
> amplification at the ultimate frequency. Once upon a time, frequency
> limits may have made that unfeasible.
I have a supply of MAR-1s that should do the trick there.

>
> Also, if you have one stage that basically generates harmonics, and
> then you expect to pick off the desired frequency, that filtering
> may need to be much better than multiple stages. If you start
> with a low enough crystal frequency, the next harmonic may be too close
> and some of it will get through the filter on the ultimate frequency.
> If you have a string of multipliers, each does filtering so the next
> stage only has to deal with filtering out a relatively high frequency.
>
I wouldn't try a diode to go from 72 to 1296 but will double or triple
the oscillator and perhaps try the diode from there.

> Note that your two examples aren't comparable. The first example you
> say multiplies by 17, while the second only multiplies by 6. Even in
> the old days, it wasn't uncommon to see a jump like 6, but something
> like 17 was less common.
Sorry, it was a factor of 9, not 17. I just found the circuit:) The xtal
was 17 MHz.

>
> The real trick seems to be to start with as high a frequency as possible.
> Then the multiplication needed is limited, and it's far easier to filter
> out harmonics from a higher frequency crystal than a lower one.

>
> Michael VE2BVW
Thanks for your thoughts.
Alan

>

## 698. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 02:19:26 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <4834D82E.8050904@nosspam.activ8.net.au>
Source record: 5135

Allodoxaphobia wrote:

> Are you building tens of thousands like Electrophone and King did?
> There was more than 'good' engineering involved with those boxes.
> The bean counters were all over it, too -- I'm sure.
>
> Jonesy

No, this is a "one-off" from my junk box.
Alan

## 699. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 02:29:00 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <4834DA6C.6060407@nosspam.activ8.net.au>
Source record: 5136

Paul Keinanen wrote:

> Sounds like a step recovery diode (SRD) multiplier, which generates a
> very broad spectrum.
.....
I have a couple of SRDs but they seem to be optimised for 500MHz input
and I don't know if they would work at lower frequencies. I would assume
that the diodes I mentioned are some sort of SRD or "snap" diode so I
might pull one out and try it.

> Paul OH3LWR
>

## 700. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 11:43:13 UTC
From: amdx <amdx@knology.net>
Message-ID: <b0b5d$48355c51$18d6b40c$22792@KNOLOGY.NET>
Source record: 5137

"Alan Peake" <adpeake@nosspam.activ8.net.au> wrote in message
news:4833C898.2090302@nosspam.activ8.net.au...
> Hello all,
> I am trying to muliply a 72MHz crystal oscillator to 1296 MHz. My
> first approach was to just make a series of X2 or X3 transistor mulipliers
> to get the require X18 multiplication fact. However, I have found two
> pieces of equipment in the junk box which just use diode multipliers. One
> is an old Electrophone UHF CB radio which multiplies the crystal
> oscillator by 17 (I think, from memory)then uses helical resonators to
> filter the desired harmonic. The same approach is used in an old King
> aircraft transponder where the 138 MHz crystal is multiplied to 960 MHz
> with just a diode and uses the first two stages of an interdigital mixer
> to get rid of unwanted harmonics.
> So, the question is, which is the better approach? I just want a
> reasonably clean signal source to test a 1296 MHz down-converter.
> The diode approach seems simpler but is it likely to contain more spurious
> signals than a transistor multiplier chain?
> Alan
> VK2ADB
>
Here's an interesting simple circuit to generate odd harmonics.
"New Topology Multiplier Generates Odd Harmonics"
http://www.wenzel.com/pdffiles1/pdfs/RFDesign2.pdf
Mike

## 701. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 12:49:01 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <48356BBD.7060607@nosspam.activ8.net.au>
Source record: 5138

amdx wrote:

> Here's an interesting simple circuit to generate odd harmonics.
> "New Topology Multiplier Generates Odd Harmonics"
> http://www.wenzel.com/pdffiles1/pdfs/RFDesign2.pdf
> Mike

Yeah, saw that. Trouble is that I need EVEN harmonics :)
Anyway, there was some interesting info on snap diodes etc. Makes me think that the diode used in the gear I have, aren't SRDs as these seem to be mainly for microwave use. The other info I gleaned was that it's easier to get low phase noise with straight multiplication than it is with PLLs. Not that I have an urgent need for low phase noise - but it's interesting nonetheless.
Alan

## 702. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 13:24:53 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <KbFU4MHIQXNIFwC3@g3ohx.demon.co.uk>
Source record: 5139

In message <48356BBD.7060607@nosspam.activ8.net.au>, Alan Peake
<adpeake@nosspam.activ8.net.au> writes
>
>
>amdx wrote:
>
>> Here's an interesting simple circuit to generate odd harmonics.
>> "New Topology Multiplier Generates Odd Harmonics"
>> http://www.wenzel.com/pdffiles1/pdfs/RFDesign2.pdf
>> Mike
>Yeah, saw that. Trouble is that I need EVEN harmonics :)

If you want EVEN harmonics, then use the 'fullwave rectifier' circuit.
This is essentially identical to what you use to rectify the mains, but
it works at RF. One version is the simple bi-phase circuit, consisting
of a ferrite input transformer (ratio 1 : 1+1) and two rectifying
diodes. An alternative is the fullwave bridge version.

I have used the former with great success to multiply by 2, 4 and even 6
but, of course, you get a lot less with the higher order harmonics.
Also, the relative suppression of the even harmonics is less.

>Anyway, there was some interesting info on snap diodes etc. Makes me
>think that the diode used in the gear I have, aren't SRDs as these seem
>to be mainly for microwave use.

I did get involved with a comb generator which used a single step
recovery diode, driven at 6, 7 or 8MHz, to generate fairly equal
amplitude harmonics (both odds and evens) to around 600MHz.

>The other info I gleaned was that it's easier to get low phase noise
>with straight multiplication than it is with PLLs. Not that I have an
>urgent need for low phase noise - but it's interesting nonetheless.
>Alan
>
I didn't know that the "New Topology Multiplier Generates Odd Harmonics"
circuit existed. It's every bit as simple as the fullwave rectifier
circuit for generating even harmonic!
--
Ian

## 703. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 13:28:29 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <e6ta349vsjmq1jjtd1ore78011toen9prs@4ax.com>
Source record: 5140

On Thu, 22 May 2008 22:49:01 +1000, Alan Peake
<adpeake@nosspam.activ8.net.au> wrote:

>Yeah, saw that. Trouble is that I need EVEN harmonics :)

A push-pull multiplier will suppress most odd harmonics.

Paul OH3LWR

## 704. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 17:35:20 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <3e682108-29f7-43db-8107-8289d6415eb7@g16g2000pri.googlegroups.com>
Source record: 5141

On May 22, 5:49 am, Alan Peake <adpe...@nosspam.activ8.net.au> wrote:
> amdx wrote:
> > Here's an interesting simple circuit to generate odd harmonics.
> > "New Topology Multiplier Generates Odd Harmonics"
> >http://www.wenzel.com/pdffiles1/pdfs/RFDesign2.pdf
> > Mike
>
> Yeah, saw that. Trouble is that I need EVEN harmonics :)
> Anyway, there was some interesting info on snap diodes etc. Makes me
> think that the diode used in the gear I have, aren't SRDs as these seem
> to be mainly for microwave use. The other info I gleaned was that it's
> easier to get low phase noise with straight multiplication than it is
> with PLLs. Not that I have an urgent need for low phase noise - but it's
> interesting nonetheless.
> Alan

Huh? I thought you wanted to multiply by 18. 18 = 3 * 3 * 2.

If you were specific about what you want to do with the output, I missed it. If it's just low-level stuff (e.g., a signal to feed into the receiver input), you don't need much power and the multiplier can be very inefficient and still do what you want. As you note, phase noise will be better (possibly much better) than other ways of doing it, and it could be that the signal level will be a lot closer to what you want. You'll have to shield things pretty carefully to get down to microvolt levels from a PLL or other full-blown oscillator on 1.2GHz. There might already be enough 18th harmonic in the oscillator output to do what you need. I have some little very fast CMOS single gate chips that have square enough edges (under half a nanosecond rise time, unloaded) to generate quite a bit of harmonic content up that high. Though a PLL would work fine, you then need a way to set up the PLL chip, assuming you use one of the readily available programmable ones. I know for me, I could hack a decent analog multiplier with filters a lot quicker than I could a decent synthesizer. I had to do a x9 not long ago, and used a multiplication scheme. Also, I've seen small crystal oscillator modules from two different vendors that used a PLL to lock a 100MHz crystal to a lower frequency reference, and then used analog multiplication up to several times 100MHz--they are doing it for low phase noise.

Cheers,
Tom

## 705. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-22 23:27:13 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <48360151.2030601@nosspam.activ8.net.au>
Source record: 5142

K7ITM wrote:

>>Yeah, saw that. Trouble is that I need EVEN harmonics :)

>
> Huh? I thought you wanted to multiply by 18. 18 = 3 * 3 * 2.
Quite right. 18 is an even harmonic of course but I forgot about the 3*3*2 bit :)

>
> If you were specific about what you want to do with the output, I
> missed it.

It's to test a 1296 down-converter basically but will try a CW transmitter later so a bit of grunt wouldn't go astray.

.... There might already be enough 18th harmonic in the oscillator
> output to do what you need.

Could be. AT the moment I have a 2N5485 as the osc and a 2N918 as a doubler but the 2N918 runs out of puff well before 1296MHz. I have some BFR91s so I might put them into use.

> Cheers,
> Tom
73 de Alan

## 706. Re: Multiplier chains

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-23 17:18:40 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0805231313440.14728@darkstar.example.org>
Source record: 5143

On Fri, 23 May 2008, Alan Peake wrote:

>
>
> K7ITM wrote:
>
>>> Yeah, saw that. Trouble is that I need EVEN harmonics :)
>
>>
>> Huh? I thought you wanted to multiply by 18. 18 = 3 * 3 * 2.
> Quite right. 18 is an even harmonic of course but I forgot about the 3*3*2
> bit :)
>
>>
>> If you were specific about what you want to do with the output, I
>> missed it.
>
> It's to test a 1296 down-converter basically but will try a CW transmitter
> later so a bit of grunt wouldn't go astray.
>
But unless you need a signal to tune the converter to the right frequency,
this is quite a bit simpler. So long as the converter is tuned to the
right general frequency, merely something with good harmonics will do.
The fact that they will be attenuated at the desired frequency is not
a bad thing, since you won't want a strong signal for tuning the converter
anyway.

Your original post didn't give an end use, but it was easy to assume
you needed a clean signal for a transmitter of local oscillator injection
in a converter. You don't want unwanted signals there.

But for a signal generator, having extra harmonics isn't really a problem
(unless you can't be sure that your converter is tuned to the right
frequency). The extra harmonics will just be ignored by the converter's
tuned circuits.

There was a time when a lot of cheap signal generators actually used
harmonics for their upper ranges.

Michael VE2BVW

## 707. Come into the SolderSmoke!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-25 07:23:05 UTC
From: "bill.meara@gmail.com" <bill.meara@gmail.com>
Message-ID: <beb7bf20-a172-43a7-a85f-aab6274c97ea@x35g2000hsb.googlegroups.com>
Source record: 5144
Cross-posted to: rec.radio.amateur.homebrew,sci.astro.amateur,sci.electronics.basics,rec.radio.amateur.boatanchors

If you melt solder, you should be in the SolderSmoke:

SolderSmoke!
A PODCAST AND BLOG FOR ELECTRONICS HOMEBREWERS!

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Listen at: http://www.soldersmoke.com

SolderSmoke #84

May 25, 2008

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I hope you enjoy the program. Please send us feedback.

73 from Rome
Bill M0HBR N2CQR CU2JL
http://www.gadgeteer.us

# 708. REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-26 16:43:25 UTC
From: W3CQH <hsgorden@comcast.net>
Message-ID: <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>
Source record: 5145

Does anybody have the name of the substance that was sold years ago for removing the enamel coating from wires, or maybe the name of something new? You would soak the wire in it and it would soften the coating and then you just wiped the goop off the wire.

73's

# 709. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-26 19:06:15 UTC
From: dplatt@radagast.org
Message-ID: <7aerg5-09m.ln1@radagast.org>
Source record: 5146

In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
W3CQH <hsgorden@comcast.net> wrote:

>Does anybody have the name of the substance that was sold years ago for
>removing the enamel coating from wires, or maybe the name of something new?
>You would soak the wire in it and it would soften the coating and then you
>just wiped the goop off the wire.

I think you're referring to GC Electronics Strip-X. Doesn't seem to
be on the market these days, as best as I can tell.

I found a MSDS which states that it's 70% methylene chloride, 25%
cresol (isomers of cresylic acid), around 5% ammonia, plus some wax
and thickening agents.

One poster in an earlier thread stated that it was designed to work
with Formvar insulation, and might not work as well on the newer
Polythermaleze insulation.

There's a paint-and-finish stripper of a similar name (Klean-Strip
Strip-X) available these days. Like the wire-"Strip-X" it contains
methylene chloride, but it has no cresol or ammonia. Its other
ingredients include toluene, xylene, and methanol, plus a thickener
(it's relatively goopy and would probably have to be wiped off of the
wire using a paper towel or Q-tip or something like that).

These chemicals all come with fire- and health-hazard warnings... if
you use 'em, do so with proper care and precautions!

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

# 710. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-27 02:57:11 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <SbadnbMpgbka5abVnZ2dnUVZ_sjinZ2d@bright.net>
Source record: 5147

Dave Platt wrote:
> In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
> W3CQH <hsgorden@comcast.net> wrote:
>
>
>>Does anybody have the name of the substance that was sold years ago for
>>removing the enamel coating from wires, or maybe the name of something new?
>>You would soak the wire in it and it would soften the coating and then you
>>just wiped the goop off the wire.
>
>
> I think you're referring to GC Electronics Strip-X. Doesn't seem to
> be on the market these days, as best as I can tell.
>
> I found a MSDS which states that it's 70% methylene chloride, 25%
> cresol (isomers of cresylic acid), around 5% ammonia, plus some wax
> and thickening agents.
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> One poster in an earlier thread stated that it was designed to work
> with Formvar insulation, and might not work as well on the newer
> Polythermaleze insulation.
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> There's a paint-and-finish stripper of a similar name (Klean-Strip
> Strip-X) available these days. Like the wire-"Strip-X" it contains
> methylene chloride, but it has no cresol or ammonia. Its other
> ingredients include toluene, xylene, and methanol, plus a thickener
> (it's relatively goopy and would probably have to be wiped off of the
> wire using a paper towel or Q-tip or something like that).
>
> These chemicals all come with fire- and health-hazard warnings... if
> you use 'em, do so with proper care and precautions!
>

I just put a glob of solder on the soldering iron tip and dunk the
enameled wire into it until the enamel melts and the solder tins the end
of the wire. Been doing that for over 20 years now...seems to work A-OK.

Scott
N0EDV

# 711. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-27 11:09:51 UTC
From: W3CQH <hsgorden@comcast.net>
Message-ID: <wLydnWPz8ciZcabVnZ2dnUVZ_sWdnZ2d@comcast.com>
Source record: 5148

"Scott" <acepilotREMOVE@bloomer.net> wrote in message
news:SbadnbMpgbka5abVnZ2dnUVZ_sjinZ2d@bright.net...
> Dave Platt wrote:
>> In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
>> W3CQH <hsgorden@comcast.net> wrote:
>>
>>
>>>Does anybody have the name of the substance that was sold years ago for
>>>removing the enamel coating from wires, or maybe the name of something
>>>new?
>>>You would soak the wire in it and it would soften the coating and then
>>>you just wiped the goop off the wire.
>>
>>
>> I think you're referring to GC Electronics Strip-X. Doesn't seem to
>> be on the market these days, as best as I can tell.
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>> I found a MSDS which states that it's 70% methylene chloride, 25%
>> cresol (isomers of cresylic acid), around 5% ammonia, plus some wax
>> and thickening agents.
>>
>> One poster in an earlier thread stated that it was designed to work
>> with Formvar insulation, and might not work as well on the newer
>> Polythermaleze insulation.
>>
>> There's a paint-and-finish stripper of a similar name (Klean-Strip
>> Strip-X) available these days. Like the wire-"Strip-X" it contains
>> methylene chloride, but it has no cresol or ammonia. Its other
>> ingredients include toluene, xylene, and methanol, plus a thickener
>> (it's relatively goopy and would probably have to be wiped off of the
>> wire using a paper towel or Q-tip or something like that).
>>
>> These chemicals all come with fire- and health-hazard warnings... if
>> you use 'em, do so with proper care and precautions!
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> I just put a glob of solder on the soldering iron tip and dunk the
> enameled wire into it until the enamel melts and the solder tins the end
> of the wire. Been doing that for over 20 years now...seems to work A-OK.
>
> Scott
> N0EDV

Thanks Scott - I forgot that technique - Yes it does work - sometimes when you get some age on your brain, it tends to lose some of the lesser used items. - Best 73's de Howard W3CQH

# 712. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-27 13:12:49 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <0e8dcb32-263e-4a35-80a8-24af202ce311@c65g2000hsa.googlegroups.com>
Source record: 5149

On May 26, 10:57 pm, Scott <acepilotREM...@bloomer.net> wrote:
> Dave Platt wrote:
> > In article <2MudnQLupO8vdafVnZ2dnUVZ_hadn...@comcast.com>,
> > W3CQH <hsgor...@comcast.net> wrote:
>
> >>Does anybody have the name of the substance that was sold years ago for
> >>removing the enamel coating from wires, or maybe the name of something new?
> >>You would soak the wire in it and it would soften the coating and then you
> >>just wiped the goop off the wire.
>
> > I think you're referring to GC Electronics Strip-X.  Doesn't seem to
> > be on the market these days, as best as I can tell.
>
> > I found a MSDS which states that it's 70% methylene chloride, 25%
> > cresol (isomers of cresylic acid), around 5% ammonia, plus some wax
> > and thickening agents.
>
> > One poster in an earlier thread stated that it was designed to work
> > with Formvar insulation, and might not work as well on the newer
> > Polythermaleze insulation.
>
> > There's a paint-and-finish stripper of a similar name (Klean-Strip
> > Strip-X) available these days.  Like the wire-"Strip-X" it contains
> > methylene chloride, but it has no cresol or ammonia.  Its other
> > ingredients include toluene, xylene, and methanol, plus a thickener
> > (it's relatively goopy and would probably have to be wiped off of the
> > wire using a paper towel or Q-tip or something like that).
>
> > These chemicals all come with fire- and health-hazard warnings... if
> > you use 'em, do so with proper care and precautions!
>
> I just put a glob of solder on the soldering iron tip and dunk the
> enameled wire into it until the enamel melts and the solder tins the end
> of the wire.  Been doing that for over 20 years now...seems to work A-OK.

Almost all modern enameled magnet wires have Beldsol-type coatings
that are supposed to burn/vaporize at soldering temperatures, yes.

I think that some Beldsol-type coatings have a further nylon overcoat
that is quite impermeable to most of the solvents I have sitting on my
shelf... yet it vaporizes if I dunk it in solder. I think
Polythermaleze is a polyester of some kind and seems to be more
amenable to the solvents I have.

Occasionally I will run across a different enamel that's supposed to stand higher temperatures... often the color is not the same red as Beldsol but sometimes it is!

Tim N3QE

# 713. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-27 13:30:44 UTC
From: Alan Peake <adpeake@nosspam.activ8.net.au>
Message-ID: <483C0D04.8030709@nosspam.activ8.net.au>
Source record: 5150

Tim Shoppa wrote:

>
> Almost all modern enameled magnet wires have Beldsol-type coatings
> that are supposed to burn/vaporize at soldering temperatures, yes.

These seem to have a dark red or maroon colouring as opposed to older
enamels which were a golden colour. These are certainly not heat-strippable.
I don't recall the heat-strippable enamels much before the 70s.
Alan

# 714. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-27 14:02:19 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <e01791eb-b170-4c00-8284-ed7024d7c933@25g2000hsx.googlegroups.com>
Source record: 5051

On May 27, 9:30 am, Alan Peake <adpe...@nosspam.activ8.net.au> wrote:
> Tim Shoppa wrote:
>
> > Almost all modern enameled magnet wires have Beldsol-type coatings
> > that are supposed to burn/vaporize at soldering temperatures, yes.
>
> These seem to have a dark red or maroon colouring as opposed to older
> enamels which were a golden colour. These are certainly not heat-strippable.
> I don't recall the heat-strippable enamels much before the 70s.

True... the most common color for Beldsol-type stuff seems to be the
dark red. But I think some (most?) green is Beldsol-type too.

If it doesn't vaporize in solder, I usually just go at it with
sandpaper.

Tim.

# 715. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-27 16:37:03 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <eqKdnbn6x58TpaHVnZ2dnUVZ_vKdnZ2d@web-ster.com>
Source record: 5052

Scott wrote:
> Dave Platt wrote:
>> In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
>> W3CQH <hsgorden@comcast.net> wrote:
>>
>>
>>> Does anybody have the name of the substance that was sold years ago
>>> for removing the enamel coating from wires, or maybe the name of
>>> something new?
>>> You would soak the wire in it and it would soften the coating and
>>> then you just wiped the goop off the wire.
>>
>>
>> I think you're referring to GC Electronics Strip-X. Doesn't seem to
>> be on the market these days, as best as I can tell.
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>> I found a MSDS which states that it's 70% methylene chloride, 25%
>> cresol (isomers of cresylic acid), around 5% ammonia, plus some wax
>> and thickening agents.
>>
>> One poster in an earlier thread stated that it was designed to work
>> with Formvar insulation, and might not work as well on the newer
>> Polythermaleze insulation.
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>> There's a paint-and-finish stripper of a similar name (Klean-Strip
>> Strip-X) available these days. Like the wire-"Strip-X" it contains
>> methylene chloride, but it has no cresol or ammonia. Its other
>> ingredients include toluene, xylene, and methanol, plus a thickener
>> (it's relatively goopy and would probably have to be wiped off of the
>> wire using a paper towel or Q-tip or something like that).
>>
>> These chemicals all come with fire- and health-hazard warnings... if
>> you use 'em, do so with proper care and precautions!
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>
> I just put a glob of solder on the soldering iron tip and dunk the
> enameled wire into it until the enamel melts and the solder tins the end
> of the wire. Been doing that for over 20 years now...seems to work A-OK.
>
> Scott
> N0EDV

Some of the magnet wire I have will do that, some won't, and some needs
to be scraped a bit with a knife before it works -- the heat will kill

the adhesion between wire and enamel, but it won't do in the enamel.

I generally always scrape with a knife, then tin -- but I wouldn't put
anything I build through a vibe test!

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 716. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-27 22:48:49 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <fuidnRombPdMEqHVnZ2dnUVZ_jednZ2d@bright.net>
Source record: 5053

W3CQH wrote:
> "Scott" <acepilotREMOVE@bloomer.net> wrote in message
> news:SbadnbMpgbka5abVnZ2dnUVZ_sjinZ2d@bright.net...
>
>>Dave Platt wrote:
>>
>>>In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
>>>W3CQH <hsgorden@comcast.net> wrote:
>>>
>>>
>>>
>>>>Does anybody have the name of the substance that was sold years ago for
>>>>removing the enamel coating from wires, or maybe the name of something
>>>>new?
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>>enameled wire into it until the enamel melts and the solder tins the end
>>of the wire. Been doing that for over 20 years now...seems to work A-OK.
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>>Scott
>>N0EDV
>
>
> Thanks Scott - I forgot that technique - Yes it does work - sometimes when
> you get some age on your brain, it tends to lose some of the lesser used
> items. - Best 73's de Howard W3CQH
>
>

Glad to help out! I have "halfzheimers"....I've only forgotten HALF of
what I used to know! ;) Good luck with whatever project you are
working on :)

Scott
N0EDV

# 717. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-28 00:04:30 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <f32ff7a4-40f7-4007-b071-0c0b2507a5c3@2g2000hsn.googlegroups.com>
Source record: 5054

From: dplatt@radagast.org (Dave Platt) wrote on Mon, May 26 2008:

>In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
>W3CQH <hsgorden@comcast.net> wrote:
>
>>Does anybody have the name of the substance that was sold years ago for
>>removing the enamel coating from wires, or maybe the name of something new?
>>You would soak the wire in it and it would soften the coating and then you
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>I think you're referring to GC Electronics Strip-X. Doesn't seem to
>be on the market these days, as best as I can tell.
>
>I found a MSDS which states that it's 70% methylene chloride, 25%
>cresol (isomers of cresylic acid), around 5% ammonia, plus some wax
>and thickening agents.

General Cement's "Strip-X" hasn't been sold by them for at least
a dozen years. I sent them a letter some time ago, got a nice
reply to that effect from a female-named staffer "who had not
worked for them before that." :-) Their home office is also my
home town. :-)

"Strip-X" worked like a charm. For decades as an over-the-
counter product. Nothing over-the-counter now works as well as
it did from 1948 onwards to whenever they stopped repackaging it.
Note: GC did a lot of repackaging of bulk material and tools as
well as some manufacturing. GC went through a series of
corporate restructures, buys, and buy-outs, just aren't the same
company as when I left Rockford, IL, in 1956.

As a fellow professional, I've tried to find out what other
manufacturers use. Most use a mechanical "stripper" that
abrades coatings...but quite expensive, too much for the average
hobbyist. At least one "makes their own" but is very close-
mouthed on what their "own formula" is...:-)

>One poster in an earlier thread stated that it was designed to work
>with Formvar insulation, and might not work as well on the newer
>Polythermaleze insulation.

The only problems I've ever had with "Strip-X" was with some
surplus Teflon-coated (!) magnet wire obtained decades ago. But,
my last bottle of "Strip-X" dried solid about 8 years ago.

>There's a paint-and-finish stripper of a similar name (Klean-Strip
>Strip-X) available these days. Like the wire-"Strip-X" it contains
>methylene chloride, but it has no cresol or ammonia. Its other
>ingredients include toluene, xylene, and methanol, plus a thickener
>(it's relatively goopy and would probably have to be wiped off of the
>wire using a paper towel or Q-tip or something like that).

I've tried to find one out of three different brands tested,
from Lowes, Home Depot, OSH (Orchard Supply Hardware), and
Do-It Centers. They remove oil-based paints with difficulty
and aren't even close to "Strip-X" for magnet wire, any
coating. Roughly a $60 experiment in trying for a substitute
all of which were unsuccessful. Bummer.

>These chemicals all come with fire- and health-hazard warnings... if
>you use 'em, do so with proper care and precautions!

The do-gooders done did too much with all those warnings and
attempts to protect us all from everything. :-( I'd only
been using Strip-X since 1947 and known lots and lots of folks
who stripped magnet wire using Strip-X. No "fires" caused by
the stuff and most of those I knew did not suffer from any
"health-hazards" inhaling (very briefly) the stinky odor from
Strip-X. It's sort of like anything with an odor should have
"Caution: Breathing will eventually result in death!" warnings.

At one time (just about 8 years ago), pure acetone was VERY
hard to get in pint/quart containers. It is an excellent
solvent for lacquers, brush-cleaning, etc. (not good for wire
stripping though). As of about 3 years ago it and a few other
aromatic hydrocarbons started appearing in do-it-yourself
stores. Maybe there's some relaxation in all those dire
predictions, warnings, etc., etc., etc.

My late father-in-law was a polymer chemist. He died in 1977
so can't help me. I just hope that some chemist could come to
the aid of us hobbyists using coated magnet wire and provide
us with a GOOD product like Strip-X was. Meanwhile, it's back
to being VERY careful with a sharp X-Acto knofe and scraping
coatings. With #34 AWG that requires Zen-like calmness...

73, Len AF6AY

# 718. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-28 00:11:36 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9AABC33F41531VeebleFetzer@216.250.184.7>
Source record: 5055

In news:f32ff7a4-40f7-4007-b071-0c0b2507a5c3@2g2000hsn.googlegroups.com
AF6AY <LenAnderson@ieee.org> wrote:

> General Cement's "Strip-X" hasn't been sold by them for at least
> a dozen years.

Here's a link to the "Material Safety Data Sheet" for Strip-X which
shows its components with % by weight of each.

http://www2.itap.purdue.edu/msds/docs/1451.pdf

[67% methylene chloride, 17% phenol, 4% ammonia, 20% inert thickeners]

--
Bert Hyman St. Paul, MN bert@iphouse.com

# 719. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-28 06:43:42 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <KIqXXhFe8PPIFAiE@ifwtech.co.uk>
Source record: 5056

Scott Wrote:

>>>>There's a paint-and-finish stripper of a similar name (Klean-Strip
>>>>Strip-X) available these days. Like the wire-"Strip-X" it contains
>>>>methylene chloride, but it has no cresol or ammonia. Its other
>>>>ingredients include toluene, xylene, and methanol, plus a thickener
>>>>(it's relatively goopy and would probably have to be wiped off of the
>>>>wire using a paper towel or Q-tip or something like that).
>>>>
>>>>These chemicals all come with fire- and health-hazard warnings... if
>>>>you use 'em, do so with proper care and precautions!
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>>>I just put a glob of solder on the soldering iron tip and dunk the
>>>enameled wire into it until the enamel melts and the solder tins the
>>>end of the wire. Been doing that for over 20 years now...seems to
>>>work A-OK.
>>>
>>>Scott
>>>N0EDV
>> Thanks Scott - I forgot that technique - Yes it does work -
>>sometimes when you get some age on your brain, it tends to lose some
>>of the lesser used items. - Best 73's de Howard W3CQH
>
>Glad to help out! I have "halfzheimers"....I've only forgotten HALF of
>what I used to know! ;)

It's probably due to the paint stripper we've been inhaling for all
those years. Out of all the possible ingredients, I'm blaming it on the
thickener.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

# 720. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-28 11:13:02 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <BI-dnaAehZJ4oKDVnZ2dnUVZ8t_inZ2d@pipex.net>
Source record: 5057

Dave Platt wrote:
> There's a paint-and-finish stripper of a similar name (Klean-Strip
> Strip-X) available these days. Like the wire-"Strip-X" it contains
> methylene chloride, but it has no cresol or ammonia. Its other
> ingredients include toluene, xylene, and methanol, plus a thickener
> (it's relatively goopy and would probably have to be wiped off of the
> wire using a paper towel or Q-tip or something like that).
>
> These chemicals all come with fire- and health-hazard warnings... if
> you use 'em, do so with proper care and precautions!
==========
The ( potential health)problem chemicals are the C6H6-ring hydrocarbons
: toluene and xylene .

In addition to breathing the vapours , skin contact with the liquid is
outright dangerous
Most products containing these benzene/benzol derivatives are no longer
available to the public at large ,since they can cause cancer.
But.......they are very effective solvents.

Frank GM0CSZ / KN6WH

# 721. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-28 12:03:52 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <JSb%j.229$Cr.45@fe101.usenetserver.com>
Source record: 5058

AF6AY wrote:
>...
> The do-gooders done did too much with all those warnings and
> attempts to protect us all from everything.

Naaa, it's the people who think they should be rewarded for stupidity and basic capitalism that took all that stuff off the market. Some idiot did something stupid with the product and decided to sue. The company looked at a long legal fight or settlement and settled. They looked at a couple settlements and decided it would be more profitable to eliminate the product and concentrate on other things as they're not in the business to keep consumers satisfied, just get their money and keep as much of it as possible.

- W8LNA

# 722. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-28 17:16:49 UTC
From: N2EY@aol.com
Message-ID: <4e7e628e-1ff3-4621-ba4c-9ab027b54024@25g2000hsx.googlegroups.com>
Source record: 5059

On May 28, 8:03 am, gwatts <gwa...@frontiernet.net> wrote:
> AF6AY wrote:
> >...
> > The do-gooders done did too much with all those warnings and
> > attempts to protect us all from everything.

If a product is dangerous, why shouldn't it have warnings?
Particularly when
there are known carcinogens and other health hazards involved?

It's not being a "do-gooder" or "doing too much" to discover hazards
and
eliminate or contain them.

Sure, not everyone who uses Strip-X will get cancer. But some of the
components of it are known carcinogens, and a proven hazard. More
important,
we can't know ahead of time who the susceptible folks are.
>
> Naaa, it's the people who think they should be rewarded for stupidity
> and basic capitalism that took all that stuff off the market.  Some
> idiot did something stupid with the product and decided to sue.  The
> company looked at a long legal fight or settlement and settled.

Maybe. But I doubt it.

More likely, they looked at the *possibility* of such a lawsuit, the
scientific
evidence of the hazards of the ingredients, the limited profit and
declining
sales, and just stopped making the product.

Once a chemical is shown to be dangerous, the manufacturers can't
claim
ignorance anymore.

> They...decided it would be more profitable
> to eliminate the product and concentrate on other things as they're not
> in the business to keep consumers satisfied, just get their money and
> keep as much of it as possible.

Profitability is what "capitalism" and "business" are all about.
Without
profitability, a capitalist company just disappears.

Since the formula for Strip-X appears to be in the public domain,
anybody

can make it and sell it. Would *you* be willing to set up shop to make
it
and sell it, with all the risks that entails, and the very limited
market for it?

73 de Jim, N2EY

# 723. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-28 21:18:47 UTC
From: Mike Silva <snarflemike@yahoo.com>
Message-ID: <6e8316be-7f3c-4eea-86d3-073974647334@k37g2000hsf.googlegroups.com>
Source record: 5060

On May 26, 12:43 pm, "W3CQH" <hsgor...@comcast.net> wrote:
> Does anybody have the name of the substance that was sold years ago for
> removing the enamel coating from wires, or maybe the name of something new?
> You would soak the wire in it and it would soften the coating and then you
> just wiped the goop off the wire.
>
> 73's

I've always burned off the insulation with a lighter, removed the
remaining ash with a couple swipes of very fine sandpaper, and
tinned. Never had a problem yet.

Mike

# 724. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 00:09:17 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <OYCdnQitwK9EbqDVnZ2dneKdnZydnZ2d@pipex.net>
Source record: 5061

> If a product is dangerous, why shouldn't it have warnings?
> Sure, not everyone who uses Strip-X will get cancer. But some of the
> components of it are known carcinogens, and a proven hazard. More
> important,
> we can't know ahead of time who the susceptible folks are.
>> Naaa, it's the people who think they should be rewarded for stupidity
>> and basic capitalism that took all that stuff off the market. Some
>> idiot did something stupid with the product and decided to sue. The
>> company looked at a long legal fight or settlement and settled.
>
> Maybe. But I doubt it.
>
> More likely, they looked at the *possibility* of such a lawsuit, the
> scientific
> evidence of the hazards of the ingredients, the limited profit and
> declining
> sales, and just stopped making the product.
>
> Once a chemical is shown to be dangerous, the manufacturers can't
> claim ignorance anymore.
==========
And (quite rightly)the FDA , EPA and other relevant agencies at Federal
and State level will be taking action .

In Europe action against dangerous substances is nowadays increasingly
taken through legislation by the European Parliament. I welcome that

Frank GM0CSZ / KN6WH

# 725. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 02:44:46 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <kg5s34lra64p0hlgjl6h3mdhgh33k5eip9@4ax.com>
Source record: 5062

On Wed, 28 May 2008 14:18:47 -0700 (PDT) Mike Silva
<snarflemike@yahoo.com> wrote:

>On May 26, 12:43ï¿½pm, "W3CQH" <hsgor...@comcast.net> wrote:
>> Does anybody have the name of the substance that was sold years ago for
>> removing the enamel coating from wires, or maybe the name of something new?
>> You would soak the wire in it and it would soften the coating and then you
>> just wiped the goop off the wire.

>I've always burned off the insulation with a lighter, removed the
>remaining ash with a couple swipes of very fine sandpaper, and
>tinned. Never had a problem yet.

That's what I've always done, too, but the last time I suggested it,
all I heard were lots of complaints about how much easier it was to
spend a lot of time breathing odd fumes.

Yes, there certainly was a commercial product once sold for this
purpose, but I suspect the only reason it was out there was because
they knew they couldn't make much money selling "Wire Stripper Kits"
that consisted of a book of matches.

;-)

-
---
Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA
---

## 726. psk-20

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 04:47:37 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <duOdnRQqs-j3qKPVnZ2dnUVZ_j2dnZ2d@comcast.com>
Source record: 5063

would like to talk w/ anyone who has successfully bumped up the power output on any of the small wonder psk-transceivers

gary

# 727. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 12:44:31 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g1m8ff$uti$1@f04n12.cac.psu.edu>
Source record: 5064

Scott wrote:

>
> I just put a glob of solder on the soldering iron tip and dunk the
> enameled wire into it until the enamel melts and the solder tins the end
> of the wire. Been doing that for over 20 years now....

Really Scott, if it hasn't tinned after 20 years, it probably isn't
going to... hehe, sorry, couldn't help myself! ;^)

- 73 de Mike N3LI -

# 728. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 13:02:41 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g1m9hh$10dq$1@f04n12.cac.psu.edu>
Source record: 5065

AF6AY wrote:
> From: dplatt@radagast.org (Dave Platt) wrote on Mon, May 26 2008:
>
>> In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
>> W3CQH <hsgorden@comcast.net> wrote:
>>
>>> Does anybody have the name of the substance that was sold years ago for
>>> removing the enamel coating from wires, or maybe the name of something new?
>>> You would soak the wire in it and it would soften the coating and then you
>>> just wiped the goop off the wire.
>> I think you're referring to GC Electronics Strip-X. Doesn't seem to
>> be on the market these days, as best as I can tell.
>>
>> I found a MSDS which states that it's 70% methylene chloride, 25%
>> cresol (isomers of cresylic acid), around 5% ammonia, plus some wax
>> and thickening agents.
>
> General Cement's "Strip-X" hasn't been sold by them for at least
> a dozen years. I sent them a letter some time ago, got a nice
> reply to that effect from a female-named staffer "who had not
> worked for them before that." :-) Their home office is also my
> home town. :-)
>
> "Strip-X" worked like a charm. For decades as an over-the-
> counter product. Nothing over-the-counter now works as well as
> it did from 1948 onwards to whenever they stopped repackaging it.
> Note: GC did a lot of repackaging of bulk material and tools as
> well as some manufacturing. GC went through a series of
> corporate restructures, buys, and buy-outs, just aren't the same
> company as when I left Rockford, IL, in 1956.
>
> As a fellow professional, I've tried to find out what other
> manufacturers use. Most use a mechanical "stripper" that
> abrades coatings...but quite expensive, too much for the average
> hobbyist. At least one "makes their own" but is very close-
> mouthed on what their "own formula" is...:-)
>
>> One poster in an earlier thread stated that it was designed to work
>> with Formvar insulation, and might not work as well on the newer
>> Polythermaleze insulation.
>
> The only problems I've ever had with "Strip-X" was with some
> surplus Teflon-coated (!) magnet wire obtained decades ago. But,
> my last bottle of "Strip-X" dried solid about 8 years ago.

>
>> There's a paint-and-finish stripper of a similar name (Klean-Strip
>> Strip-X) available these days. Like the wire-"Strip-X" it contains
>> methylene chloride, but it has no cresol or ammonia. Its other
>> ingredients include toluene, xylene, and methanol, plus a thickener
>> (it's relatively goopy and would probably have to be wiped off of the
>> wire using a paper towel or Q-tip or something like that).
>
> I've tried to find one out of three different brands tested,
> from Lowes, Home Depot, OSH (Orchard Supply Hardware), and
> Do-It Centers. They remove oil-based paints with difficulty
> and aren't even close to "Strip-X" for magnet wire, any
> coating. Roughly a $60 experiment in trying for a substitute
> all of which were unsuccessful. Bummer.
>
>> These chemicals all come with fire- and health-hazard warnings... if
>> you use 'em, do so with proper care and precautions!
>
> The do-gooders done did too much with all those warnings and
> attempts to protect us all from everything. :-( I'd only
> been using Strip-X since 1947 and known lots and lots of folks
> who stripped magnet wire using Strip-X. No "fires" caused by
> the stuff and most of those I knew did not suffer from any
> "health-hazards" inhaling (very briefly) the stinky odor from
> Strip-X. It's sort of like anything with an odor should have
> "Caution: Breathing will eventually result in death!" warnings.

I wonder if items such as Strip-X became obsolete due to changes in insulation composition, i.e. not working on new types of insulation. But I do agree about the folk who would protect us from ourselves. Strip-X was pretty innocuous stuff.

Did you by any chance try some old style enameled wire in your experiment above?

> At one time (just about 8 years ago), pure acetone was VERY
> hard to get in pint/quart containers. It is an excellent
> solvent for lacquers, brush-cleaning, etc. (not good for wire
> stripping though). As of about 3 years ago it and a few other
> aromatic hydrocarbons started appearing in do-it-yourself
> stores. Maybe there's some relaxation in all those dire
> predictions, warnings, etc., etc., etc.

The acetone issue is a strange one. Acetone is one of the safer solvents out there, heck our body even produces some acetone. Aside from the obvious precautions for flammable materials, the biggest problem with it is for people who wear contact lenses of the plastic variety. Splash some in your eye, and if it gets to the edge of the contact, capillary action will suck it under the lens, and weld the contact to your eye. Removal effectively blinds the person. Otherwise it's pretty safe stuff. I just don't wear contacts - even under safety goggles -

when I use it.

> My late father-in-law was a polymer chemist. He died in 1977
> so can't help me. I just hope that some chemist could come to
> the aid of us hobbyists using coated magnet wire and provide
> us with a GOOD product like Strip-X was. Meanwhile, it's back
> to being VERY careful with a sharp X-Acto knofe and scraping
> coatings. With #34 AWG that requires Zen-like calmness...

That is an understatement1 8^) I have to make sure I am in a good mood,
and no coffee for me that day before I attempt that sort of thing.

- 73 de Mike N3LI -

# 729. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 13:34:43 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g1mbdj$u1e$1@f04n12.cac.psu.edu>
Source record: 5066

N2EY@aol.com wrote:
> On May 28, 8:03 am, gwatts <gwa...@frontiernet.net> wrote:
>> AF6AY wrote:
>>> ...
>>> The do-gooders done did too much with all those warnings and
>>> attempts to protect us all from everything.
>
> If a product is dangerous, why shouldn't it have warnings?
> Particularly when there are known carcinogens and other health hazards involved?
>
> It's not being a "do-gooder" or "doing too much" to discover hazards
> and eliminate or contain them.

I think it a matter of magnitude.

Some items such as Benzene are pretty dangerous and have an established
track record of making people sick. Those should go whenever possible.

OTOH, the little bottle of Strip-X with it's foul stench is probably not
going to cause anyone harm outside of self inflicted (i.e. suicide attempts)

Of course, I'm not so sure if Strip-X was discontinued because of health
concerns or that it just didn't work any more on new generations of
enameled wire.

> Sure, not everyone who uses Strip-X will get cancer. But some of the
> components of it are known carcinogens, and a proven hazard. More
> important,
> we can't know ahead of time who the susceptible folks are.
>> Naaa, it's the people who think they should be rewarded for stupidity
>> and basic capitalism that took all that stuff off the market. Some
>> idiot did something stupid with the product and decided to sue. The
>> company looked at a long legal fight or settlement and settled.
>
> Maybe. But I doubt it.
>
> More likely, they looked at the *possibility* of such a lawsuit, the
> scientific evidence of the hazards of the ingredients, the limited profit and
> declining sales, and just stopped making the product.
>
> Once a chemical is shown to be dangerous, the manufacturers can't
> claim ignorance anymore.
>
>> They...decided it would be more profitable
>> to eliminate the product and concentrate on other things as they're not
>> in the business to keep consumers satisfied, just get their money and

>> keep as much of it as possible.
>
> Profitability is what "capitalism" and "business" are all about.
> Without profitability, a capitalist company just disappears.
>
> Since the formula for Strip-X appears to be in the public domain,
> anybody can make it and sell it. Would *you* be willing to set up shop to make
> it and sell it, with all the risks that entails, and the very limited
> market for it?

There you touch on the real issue with items like Strip-X. The
manufacturing side. While I might have my little bottle that I get out a
time or two during the day, the people making the stuff have exposure
issues well beyond that.

As an aside:

The butter flavor on your popcorn (diacetyl) has a nasty side effect
for the people who make it (and apparently at least one microwave
popcorn addict) when it vaporizes, it can pretty seriously impair lung
function. It is a natural substance, but the way in which it is used is
the problem

http://en.wikipedia.org/wiki/Diacetyl

http://www.butterflavoringlunginjury.com/index.htm

http://defendingscience.org/Diacetyl-Background.cfm

But I digress. My main point is that while we might not get much
exposure, those who produce it just might be getting serious contact
with nasty chemicals.

- 73 de Mike N3LI -

## 730. Breting 14 tube location please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 18:05:55 UTC
From: Paul P <"REMOVE paul"@REMOVE>
Message-ID: <7gC%j.34191$fk.21961@trnddc06>
Source record: 5067
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Does some one have a diagram of the tube locations for a Breting 14? I would appreciate saving the time of ferreting out the schematic against the sockets.

Thanks,
Paul P.

paul att ppinyot dot com
http://www.ppinyot.com/breting_14.htm

## 731. Re: Breting 14 tube location please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 18:16:02 UTC
From: exray <radioexray@geeeemail.com>
Message-ID: <b8975$483ef2e5$15355@news.teranews.com>
Source record: 5077
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Paul P wrote:
> I would appreciate saving the time of ferreting out the schematic against the
> sockets.

Me too.

-Bill

.
** Posted from http://www.teranews.com **

# 732. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 18:44:48 UTC
From: Skipp <skipp025@yahoo.com>
Message-ID: <g1mtj0$ko8$1@skeeter.ucdavis.edu>
Source record: 5068

Hello everyone,

Regarding Astron Power Supplies, repair, retrofit, information and modifications of the supply hardware and replacement Regulator Boards.

There are/were a number of different Astron Power Supply Regulator Board versions made and configured. What is placed on the specific board is related to it's capacity and type of operation. Depending on the year of production, the size and the series the boards can and do change a bit. Here's the url for the Repeater Builder web page,which has a lot of good information:

http://www.repeater-builder.com/astron/astron-index.html

In some of the online yahoo groups I've mentioned some of the short falls of the original Astron Circuit design and how I dealt with them. Since that time I started selling replacment regulator boards with updates and related information.

I offer a complete updated Astron Regulator board package, which is the populated board and instruction sheet. The package also contains my notes, information and various circuit diagrams. The price is $45 plus the cost or US Priority Mail (about $4.35)

When your original Astron Board becomes problematic... my drop in replacement is an updated clone of the original board with modern improvements. Indeed Astron has included some of the mentioned improvements onto some of their current regulator boards (but not all). I've also addressed the fairly problematic crow-bar circuit layout and part values to make the retrofit regulator board more stable. I've never had one fail...

The variable supply is the same type board with part modifications to allow adjustment of the output voltage within a practical range. The ability to convert your specific supply to variable control is probably more dependent on the date of mfgr of your regulator and the version of your board. I have a list of each original Astron Regulator Board part value based on size and the values on my replacement boards. If you've charcoaled a part value I can supply the value information.

By Email and telephone I'm happy to help you trouble shoot your supply, regardless of the mfgr. But my time is limited and I might not get back to you right away so please be patient.

cheers,
skipp

skipp025 at yahoo.com
www.radiowrench.com

: Toby <josdek2@aol.com> wrote:
: I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
: have modified this model to become a variable voltage supply but have not
: found any schematics etc for this mod. Can anyone point me in the right
: direction? Thanks!

## 733. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 18:46:41 UTC
From: Skipp <skipp025@yahoo.com>
Message-ID: <g1mtmh$ko8$2@skeeter.ucdavis.edu>
Source record: 5069

: Here is the schematic for a 35, it should ve similar to the 20 except for
: an extra pass transistor or two.
: http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg

No, it's different... and also dependent on the age of the supply. The
other size supply diagrams should be used as a guide only.

cheers,
skipp

skipp025@yahoo.com

# 734. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 18:48:37 UTC
From: Skipp says hello <skipp025@yahoo.com>
Message-ID: <g1mtq5$ko8$3@skeeter.ucdavis.edu>
Source record: 5070

The crowbar circuit operation should never damage the meter movements or
related sense resistors.

cheers,
s.

: geek <geek@localhost.localdomain> wrote:

: I modded one of those significantly. Too long ago to remember the exact
: thing I did, but DO put that crowbar SCR anode on the collector of the
: pass transistors. If it trips as is, you kiss the current meter and
: expensive current sense resistor goodbye.

: Cheers,
: __
: Gregg

## 735. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 18:58:09 UTC
From: Skipp <skipp025@yahoo.com>
Message-ID: <g1muc1$ko8$4@skeeter.ucdavis.edu>
Source record: 5071

:> And there should be a fuse in there to blow between the
:> filter cap and crowbar.

No, a really bad practice... don't do it.

:> The supply was actually 3rd world designed and made I swear.

Many parts/portions are done in Mexico...

: Better yet, put in a Resettable Circuit Breaker, as you can never find
: the right fuse, and they ALWAYS blow at the worst possible moment.....

No... you're asking for a serious problem and it's just a question of
when and not if.

cheers,
skipp

## 736. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 19:01:33 UTC
From: Skipp <skipp025@yahoo.com>
Message-ID: <g1muid$ko8$5@skeeter.ucdavis.edu>
Source record: 5072

A number of gremlins cause the crow-bar to mis-fire. Just depends on
your specific regulator board version and part values used. One of the
reasons I came up with my replacment regulator board option.

http://www.repeater-builder.com/astron/astron-index.html

I've not seen a newer generation crow-bar circuit fail causing
equipment damage.. but as always your results might vary.

cheers,
s.

: A <arthures@panix.com> wrote:

: We had a thread recently on Astron power supplies and I thought I'd
: mention that I have an RS-35A (35 amps intermittent) for VHF brick
: amplifiers (main use) and I've had it for some 20 years. Recently, the PS
: has started to "crowbar" off on me (voltage goes to zero) and not even
: with high currents (maybe around 15 amps or so) and have to shut it off,
: wait a few seconds, and turn it back on.

: I also had another different regulated fairly high current DC PS go bad
: long ago, in a similar way.

: I'm wondering how many others of you have seen defective operation,
: sooner or later, or other deterioration in your high current regulated DC
: supplies?

: And, if the overvoltage crowbar craps out, it blows up your rig? I'm
: thinking of going exclusively back to deep cycle marine batteries, again.

## 737. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 19:18:50 UTC
From: Skipp <skipp025@yahoo.com>
Message-ID: <g1mviq$ko8$6@skeeter.ucdavis.edu>
Source record: 5073

Re: Astron Power Supply Crow-bar Circuit Operation

:> I'm wondering how many others of you have seen defective operation,
:> sooner or later, or other deterioration in your high current regulated
:> DC supplies?

Happens more with the older supplies... part values change with time.

: However operation of a crowbar should blow a fuse fitted 'upstream' of
: the pass transistors. As already explained earlier in this thread ,the
: crowbar should also be fitted 'upstream the pass transistors (but
: 'downstream' the fuse , while sensing the output voltage .

I don't agree...

: If the Astron voltage regulator would be suspect I would recommend a
: very simple circuit with a 7812 voltage regulator and a PNP transistor
: ,its output 'steering' the pass transistors .
: Ref : Experimental Methods in RF Design , by W7ZOI-KK7B- W7PUA
: page 1.15

Not a good idea... regulation really suffers bad.

: Instead of the 3 legged 7812 you can also use the similar LM317
: enabling output voltage adjustment
: After all this is a homebrew NG

No good... if you're only trying to get in the ball park maybe... if
you plan to use and trust the supply with expensive equipment you should
stick with an LM-723 or similar circuit properly designed using the mfgrs
data sheet information.

cheers,
skipp

## 738. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 19:20:39 UTC
From: Skipp Isaham <skipp025@yahoo.com>
Message-ID: <g1mvm7$ko8$7@skeeter.ucdavis.edu>
Source record: 5074

```
: and if your really smart, you will dump the fuse, and replace it with
: a Resettable Circuit Breaker, because Murphy's Law states the Crowbar
: will do it's thing, ALWAYS at the worst possible moment, and the
: appropriate replacement fuse will be a 5 miles drive away, at the
: closest. You mileage may vary.....

The auto reset circuit breaker helps to start the fire, which takes out
the site/building. Not a good idea...

cheers,
s.
```

## 739. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 19:27:35 UTC
From: Skipp says hello <skipp025@yahoo.com>
Message-ID: <g1n037$ko8$8@skeeter.ucdavis.edu>
Source record: 5075

: The diagram looks strange to me, with a direct connection from the
: higher voltage driver supply (e.g. pin 12 of the 723 or collector of
: Q2) to the base of the series pass transistors.

The pass transistor pre-drive transistor is a simple current amplifier.

: With a higher separate driver power supply the driver current should
: flow through the Q2 driver transistor, through the small resistors
: into the base connection of the series pass transistor. Thus in the
: diagram the direct connection from the driver supply to the series
: pass transistor base should be removed.

Some of the available circuit diagrams have mistakes...

:>I modded one of those significantly. Too long ago to remember the exact
:>thing I did, but DO put that crowbar SCR anode on the collector of the
:>pass transistors. If it trips as is, you kiss the current meter and
:>expensive current sense resistor goodbye.

: When using crowbars, there should be a some kind of fuse on the
: feeding side, preferably immediately after the filter capacitor.

No, you want the entire supply to remove itself from operation if
the crow-bar circuit fires.

: If the crowbar is before the series pass transistors, it is a good
: idea to put a large reverse biased diode across the series transistors
: (CR7 in the diagram), which would discharge any large capacitors on
: the regulated side through the crowbar. Without the diode, the
: collector side would be at 0 V after the crowbar tripped, but the
: emitters could still be at +12 V due to any large capacitors on the
: regulated side.

An expensive part... the crow-bar is best left at the tail end of the
supply (where it is now).

cheers,
s.

# 740. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 19:31:24 UTC
From: Skipp <skipp025@yahoo.com>
Message-ID: <g1n0ac$ko8$9@skeeter.ucdavis.edu>
Source record: 5076

Amen Paul,

The Astron 25 amp variable supply is pretty much the parts for the higher rated supply in the same case. The no free lunch rule applies. If you modify your specific supply for varilable control... it will quickly become to hot at lower voltage - higher current values.

cheers,
s.

: Paul Keinanen <keinanen@sci.fi> wrote:

:>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
:>have modified this model to become a variable voltage supply but have not
:>found any schematics etc for this mod. Can anyone point me in the right
:>direction? Thanks!

: While the output voltage of practically any regulated linear power
: supply can be varied by changing one or two resistors, one should
: remember that the power dissipation in the series pass transistors
: will increase significantly, if voltages much below the nominal
: voltage is required, thus you may have to increase the number of
: series pass transistors or at least increase the heatsink surface 2-4
: times the original.

: Also you may have to use some foldback current limitation system to
: keep the series pass transistor dissipation at a reasonable level e.g.
: when driving car head lights or other nearly short circuit loads.

: When fully understanding these issues, the commercially available
: devices can be quite interesting building blocks, when creating power
: supplies for your own needs.

: Paul OH3LWR

## 741. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 22:57:47 UTC
From: Dave M <masondg4xx4@cxxomcast.net>
Message-ID: <67bu34t51031nrmdsce5aa3edpd25bhk8s@4ax.com>
Source record: 5078

On Wed, 07 May 2008 08:08:44 +0300, Paul Keinanen <keinanen@sci.fi> wrote:

>On Sun, 04 May 2008 23:51:08 -0700, geek <geek@localhost.localdomain>
>wrote:
>
>>On Mon, 05 May 2008 02:04:09 -0500, Ralph Mowery wrote:
>>
>>>
>>> "Toby" <josdek2@aol.com> wrote in message news:i8vTj.791$b%1.295@trndny04...
>>>>I have an Astron RS-20A, 20amp 12v fixed DC supply. I've heard that people
>>>>have modified this model to become a variable voltage supply but have not
>>>>found any schematics etc for this mod. Can anyone point me in the right
>>>>direction? Thanks!
>>>>
>>>
>>> Here is the schematic for a 35, it should ve similar to the 20 except for
>>> an extra pass transistor or two.
>>>
>>> http://www.repeater-builder.com/astron/pix/astron-vs35m.jpg
>
>The diagram looks strange to me, with a direct connection from the
>higher voltage driver supply (e.g. pin 12 of the 723 or collector of
>Q2) to the base of the series pass transistors.
>
>With a higher separate driver power supply the driver current should
>flow through the Q2 driver transistor, through the small resistors
>into the base connection of the series pass transistor. Thus in the
>diagram the direct connection from the driver supply to the series
>pass transistor base should be removed.
>

You're right about the schematic in the link above. There is an error in the drawing. The wire between the collector of Q2 and the bases of the pass transistors Q101 and Q102 should not be there. That connection would put full rectifier output on the bases of the pass transistors, turning them fully on, resulting in the PS output going way high with no regulation. Maybe even destroying the pass transistors.

However, the link is to a schematic for a RS-35, not an RS-20. The OP has an RS-20, and the proper schematic link should be http://www.repeater-builder.com/astron/pix/astron-rs20-1988-09-23.gif.

>>I modded one of those significantly. Too long ago to remember the exact
>>thing I did, but DO put that crowbar SCR anode on the collector of the
>>pass transistors. If it trips as is, you kiss the current meter and

>>expensive current sense resistor goodbye.

Remember that the purpose of the crowbar is to protect the load from power supply overvoltage, not to protect the power supply. The crowbar should be connected to the regulator output, not the input. If connected to the input, the reservoir capacitor(s) on the output are still charged when the crowbar fires, and the overvoltage condition is applied to the load until the capacitors drain. The load is unprotected.

Remember also that most of the Astron supplies have current foldback limiting. That means that on a shorted output condition, the regulator should reduce the available current into the short to a significantly lower level, protecting the pass elements and regulator.
>
>When using crowbars, there should be a some kind of fuse on the
>feeding side, preferably immediately after the filter capacitor.
>
>If the crowbar is before the series pass transistors, it is a good
>idea to put a large reverse biased diode across the series transistors
>(CR7 in the diagram), which would discharge any large capacitors on
>the regulated side through the crowbar. Without the diode, the
>collector side would be at 0 V after the crowbar tripped, but the
>emitters could still be at +12 V due to any large capacitors on the
>regulated side.
>
>Paul OH3LWR
>
==========

Dave M

Never take a laxative and a sleeping pill at the same time!!

## 742. Available: 6146s

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-29 23:29:15 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0805291921310.11481@panix2.panix.com>
Source record: 5079
Cross-posted to:
rec.radio.amateur.boatanchors,alt.ham-radio.marketplace,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I have a number of 6146s that I know I'll never use in the future and
would like to sell them to someone who will, or wants spares.

All used, many known to be good from prior use or users. Couple in
original boxes. Might be one 6146a, one 6146w. If this is important, let
me know.

$3.00 money order per each, plus postage (USPS).

$2.50 each for all to one buyer.

Respond to the given email address associated with this post (its live but
has spam assasin set up so don't talk too much commercialism or it might
get bombed to /dev/null). If I don't respond in a day, then make a post
responding to this and give your munged email address and I'll get back
to you.

Art

# 743. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-30 00:23:47 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <IZqdnb4I8Z2O1KLVnZ2dnUVZ_t3inZ2d@bright.net>
Source record: 5080

Michael Coslo wrote:

> Scott wrote:
>
>>
>> I just put a glob of solder on the soldering iron tip and dunk the
>> enameled wire into it until the enamel melts and the solder tins the
>> end of the wire. Been doing that for over 20 years now....
>
>
>
> Really Scott, if it hasn't tinned after 20 years, it probably isn't
> going to... hehe, sorry, couldn't help myself! ;^)
>
> - 73 de Mike N3LI -
LOL! Ha! Good one. I didn't even catch that one :) My high school
English teacher would probably slap me for that one ;)

Scott
N0EDV

# 744. Re: Modify Astron Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-30 07:10:21 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <o0av34l6gdmg0ro1tjr4k5nrq5i1i5h3e9@4ax.com>
Source record: 5081

On Thu, 29 May 2008 18:57:47 -0400, Dave M <masondg4xx4@cxxomcast.net>
wrote:

>Remember that the purpose of the crowbar is to protect the load from power
>supply overvoltage, not to protect the power supply. The crowbar should be
>connected to the regulator output, not the input. If connected to the input,
>the reservoir capacitor(s) on the output are still charged when the crowbar
>fires, and the overvoltage condition is applied to the load until the capacitors
>drain. The load is unprotected.

Just put a reverse biased diode across the series pass transistors.
When the crowbar at the main capacitor fires, the output capacitor
will be discharged through that diode and crowbar, protecting the
load.

>
>Remember also that most of the Astron supplies have current foldback limiting.
>That means that on a shorted output condition, the regulator should reduce the
>available current into the short to a significantly lower level, protecting the
>pass elements and regulator.

Foldback limiting requires that the differential amplifier (in the
723), driver and series pass transistors are working properly, thus,
the crowbar+foldback limiting works properly only if the 723 reference
voltage is erratic. In all other failure modes, such as dead 723,
shorts in driver or series pass transistors, it is quite unlikely that
the foldback would work as expected, if the crowbar fires due to
output overvoltage.

Paul OH3LWR

## 745. Re: Grid circuits for RF power amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-30 16:14:03 UTC
From: Skipp on yahoo <skipp025@yahoo.com>
Message-ID: <g1p94b$j74$1@skeeter.ucdavis.edu>
Source record: 5082

I would invite you to join the Yahoo rfamplifiers group and ask the
question over there.

http://groups.yahoo.com/group/rfamplifiers

cheers,
s.

: Richard <nearlynews_email@ntlworld.com> wrote:
: I need some information on an appropriate input circuit for a small RF power
: amplifier using a 2E26 operating in the HF region. Output would be about 27
: watts. Drive input power about 0.12 watts.

: I want the input circuit of the PA to present a 50 or 75 Ohm load to the
: driver (the exciter - probably a CW QRP rig - will supply about 0.12
: watts). Perhaps (I muse) it would be good, (certainly it would be
: convenient) if the input circuit was NOT a tuned input circuit, but see
: below.

: Questions (that incidentally show my thinking):

: Can anyone point me to a website that gives the design data for an
: appropriate circuit given the things I have mentioned?

: Is it okay to have an untuned grid circuit? I muse no problem if the
: exciter has a pi-network output circuit. I just wonder that if the exciter
: uses a pi network, if that would represent both the exciter anode/collector
: tank circuit, and the grid tank circuit. (So, really there would be a tuned
: input circuit - the output pi-network of the exciter). (Just shows I know
: nothin', I'm not even certain whether solid stage rigs use Pi-networks to
: match with the load).

: Any thoughts on biasing arrangement - fixed bias, drive bias, or cathode
: bias? (Perhaps fixed bias is best - no need for a clamp valve). Grid bias
: needs to be about - 45 volts. Muse that a simple RF choke supplying the bias
: to grid would suffice.

: So, basically, I want to be able to plug a QRP rig into the PA, tune up the
: QRP rig and the plate circuit of PA, and that's it.

# 746. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-30 18:09:54 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <477f97d9-e640-4d69-ad4c-b6b5c2238cce@s33g2000pri.googlegroups.com>
Source record: 5083

From: Michael Coslo on Thurs, May 29 2008 6:02 am:
>
>AF6AY wrote:
>> From: dplatt@radagast.org (Dave Platt) wrote on Mon, May 26 2008:
>>> In article <2MudnQLupO8vdafVnZ2dnUVZ_hadnZ2d@comcast.com>,
>>> W3CQH <hsgorden@comcast.net> wrote:

>I wonder if items such as Strip-X became obsolete due to changes in
>insulation composition, i.e. not working on new types of insulation. But
>I do agree about the folk who would protect us from ourselves. Strip-X
>was pretty innocuous stuff.

As far as I could tell from communications with General Cement,
it was FEDERAL REGULATIONS that was the issue. GC already had
over a hundred products in its catalog so they weren't going to
suffer any real loss in income. They've been making 'radio'
chemical products for over 75 years.

>Did you by any chance try some old style enameled wire in your
>experiment above?

"Experiment?" The only experimentation I did was well AFTER
my last bottle of Strip-X was used up, residue dried out. Strip-X
from GC worked for me the first time I tried it long, long ago.
That experimentation I wrote about was to find a possible
substitute for GC Strip-X.

GC Strip-X has worked on enamel-coated magnet wire, PolythermalEze
(a trade name), different kinds of wire-wrap wire. It didn't work
on the surplus Teflon-coated #25 AWG magnet wire I got surplus
from a transformer maker (#25 is an odd gauge, heh heh, but the
transformer makers use practically every gauge in the AWG table).
Tetrafluouroethylene is pretty inert stuff so few chemicals will
affect it. Teflon also abrades easily compared to other
insulations so it is relatively easy to strip with a knife.

> The acetone issue is a strange one. Acetone is one of the safer
>solvents out there, heck our body even produces some acetone.

I think that should be 'acetyls' in the human body, not
acetone per se. <shrug>

Acetone won't strip off enamels or other polymers used on
magnet wire. I tried that, too, also toluene.

Acetone as a solvent was dropped from the model hobby industry
chemicals once gas-powered models started using "hot fuel," the

methanol-based stuff for glow plug engines that took over from real spark plug ignition model gas engines in the late 1940s. Methanol softened acetate-based paints, whereas the 'ordinary' gasoline used in spark ignition engine fuel did not affect acetone-solvent lacquer commonly called "dope" in model hobby industry jargon. For years Testor Chemical Company, also in Rockford, IL, had lacquer paint bottle labels of DOPE in all-capitals, something you just CANNOT DO in today's restrictive society. Building model airplanes was fun, the "dope" smelled very nice, so the blue-noses made all kinds of bad noises about the "evils" of having fun in a hobby. Sigh.

Digression: The first small two-cycle gasoline engines used real spark plugs of very small size. I still have two Champion brand spark plugs in a storage area...less than a half-inch long...and those are for the big class C and D engine displacements. I learned to solder wires properly by making the spark ignition packages for gas-powered models. The "spark coil" for those was a tiny one that was picked up by the first electronic flash units for camera use in the 1950s...ideal for igniting the Xenon flash tubes that replaced the one-shot photoflash bulbs.

Yes, I was emitting "spark" RF in the late 1940s with those spark-ignition engines, all without being licensed to do so. So were other gas-engine modelers and just about EVERY running automobile of that time! :-)

>> My late father-in-law was a polymer chemist. He died in 1977
>> so can't help me. I just hope that some chemist could come to
>> the aid of us hobbyists using coated magnet wire and provide
>> us with a GOOD product like Strip-X was. Meanwhile, it's back
>> to being VERY careful with a sharp X-Acto knofe and scraping
>> coatings. With #34 AWG that requires Zen-like calmness...
>
>That is an understatement1 8^) I have to make sure I am in a good mood,
>and no coffee for me that day before I attempt that sort of thing.

Coffee calms me down. Always has. Makes for good moods. :-)

Actually, I use a fine emery finishing paper to strip fine gauges of enamel-coated wire. I've used X-Acto hobby knives for the heavier gauges. Emery paper (easy to get at do-it-yourself stores) allows a gentle stroking of a folded emery paper over the wire. I find it works better to draw the emery paper over the wire rather than pulling the wire through the paper. Less nicking than with a knife blade for #28 to #34. I just finished a few small toroid inductors using #34 enamel-covered last week. Not recommended for beginners. :-)

PATIENCE (in all-caps) is needed to make toroids of the T37 size (about 3/8" OD), drawing a very-carefully-folded wire

bundle through the center hole in a toroid core. :-) THAT is the "Zen" thing. Good self-control is absolutely necessary, can't use slap-dash hurry-up behavior.

By the way, don't use "Q-Dope" for coating finished inductors, any type. Despite what the ads say, it does NOT enhance the coil's Q. Trials of before-after measurements on a Q-Meter haven't shown goodness. ALL coatings degrade inductor Q. I've found that oil-based 'maritime' clear varnish to result in less degredation of Q than other coatings. I've used McCloskey "Gym-Seal" brand with good success on making inductor coatings that adhere to windings for years. It is available nationally in do-it-yourself stores.

Q-Dope (originally acetate-solvent based, now probably using toluene solvent) will "lift" from smooth surfaces within a year in climates with only moderate humidity. Q-Dope only adheres well to all-polymer-based surfaces, won't get into fine pores. 'Maritime' varnishes NOT polyurethane based DO grab porous surfaces. I've tried various polyurethane-based varnishes with mixed results; the makers of those apparently have a rather large variation of ingredients. Varnishes take 2, 3 days to properly cure if used on coils. That's the down-side of using the stuff in hobby applications. However, on a Q-Meter the characteristics of 'maritime' varnish coated inductors don't change much after it has reached a tacky state, roughly 12 hours after application. It ain't for 'weekender' projects started on a Saturday and 'finished' on Sunday.

73, Len AF6AY

# 747. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-30 18:44:20 UTC
From: jimmie68@gmail.com
Message-ID: <ea5c48b7-3033-445e-b4b0-3cb78d20edce@34g2000hsh.googlegroups.com>
Source record: 5084

On May 28, 5:18 pm, Mike Silva <snarflem...@yahoo.com> wrote:
> On May 26, 12:43 pm, "W3CQH" <hsgor...@comcast.net> wrote:
>
> > Does anybody have the name of the substance that was sold years ago for
> > removing the enamel coating from wires, or maybe the name of something new?
> > You would soak the wire in it and it would soften the coating and then you
> > just wiped the goop off the wire.
>
> > 73's
>
> I've always burned off the insulation with a lighter, removed the
> remaining ash with a couple swipes of very fine sandpaper, and
> tinned.  Never had a problem yet.
>
> Mike

Same idea but I use an alcohol burner like the ones that used to come
in chemistry sets. Those burners are incredably useul. Combined with a
blowpipe you can melt glass and braze small parts.

Jimmie

## 748. Re: Breting 14 tube location please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-31 01:50:10 UTC
From: Omer S <oabukovac@earthlink.net>
Message-ID: <9JmdnUE4-uMgM93VnZ2dnUVZ_vWdnZ2d@earthlink.com>
Source record: 5085
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Paul,

Check this web site out. Perhaps these schematics, will give you better
idea what's going on.

Omer

http://members.cox.net/n7rk//breting.htm

"Paul P" <REMOVE paul @ REMOVE ppinyot . REMOVEcom> wrote in message
news:7gC%j.34191$fk.21961@trnddc06...
> Does some one have a diagram of the tube locations for a Breting 14? I
> would appreciate saving the time of ferreting out the schematic against
> the
> sockets.
>
> Thanks,
> Paul P.
>
> paul att ppinyot dot com
> http://www.ppinyot.com/breting_14.htm
>

## 749. Re: Breting 14 tube location please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-31 05:26:29 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <4840e17f$0$4111$4c368faf@roadrunner.com>
Source record: 5086
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Omer S wrote:
> Paul,
>
> Check this web site out. Perhaps these schematics, will give you better
> idea what's going on.
>
> Omer
>
>
> http://members.cox.net/n7rk//breting.htm

Ooooh, he has a Breting 9. I have one of those at the shop I
need to recap and make work again.

Jeff

## 750. Re: Am I getting multipath distortion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-31 10:50:55 UTC
From: PhattyMo <phattymo@not.net>
Message-ID: <48412d8d$0$48216$815e3792@news.qwest.net>
Source record: 5087
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Frank Raffaeli wrote:
> On May 1, 9:58 pm, mpm <mpmill...@aol.com> wrote:
>> On May 1, 10:48 pm, mpm <mpmill...@aol.com> wrote:
>>
>>> I second the thought about electrical safety around kids and water.
>>> -mpm
>>> .
>> Oops, another thought just came to me.
>> If you're moving the camera / transmitter, it might have a real
>> chicken-s^it timebase (crystal?) or whatever and could be sensitive to
>> motion and going slightly off frequency with every bump (step taken).
>> Maybe you can eliminate this possibiliity by walking very softly.
>> Like that Karate guy on TV used to do on the onion paper... :)
>
> It is almost certainly multipath: The frequency, mobility, and
> environment are wrong for what you're trying to do. If you can lower
> the frequency - the lower, the better - then this will help. For
> example, 72 MHz. You an make it legal by applying for an
> experimenter's permit (if in the USA, see FCC form 442).
>
> I'm not sure if you can find any commercial transmitters below 900
> MHz, so you may need to DIY.
>
> There may be wireless products for DVB-H, DVB-T which would
> theoretically be an improvement.
>
> As one poster mentioned, your best bet may be a cable.
>
> Frank Raffaeli

What about a plain old modulator?
They make some decent frequency agile ones for whole-house distribution
and whatnot,some have up to ~1W of output. (CATV modulators)

## 751. Re: Astron power supplies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-05-31 16:22:54 UTC
From: You <you@shadow.orgs>
Message-ID: <you-CDC790.08225031052008@netnews.worldnet.att.net>
Source record: 5088

In article <g1mvm7$ko8$7@skeeter.ucdavis.edu>,
Skipp Isaham <skipp025@yahoo.com> wrote:

> : and if your really smart, you will dump the fuse, and replace it with
> : a Resettable Circuit Breaker, because Murphy's Law states the Crowbar
> : will do it's thing, ALWAYS at the worst possible moment, and the
> : appropriate replacement fuse will be a 5 miles drive away, at the
> : closest. You mileage may vary.....
>
> The auto reset circuit breaker helps to start the fire, which takes out
> the site/building. Not a good idea...
>
> cheers,
> s.

Nobody said ANYTHING about an "auto reset" circuit breaker, or anything
else "auto reset". Don't be reading in your own prejudices.....

## 752. Re: Breting 14 tube location please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-01 02:11:41 UTC
From: jangus@socal.rr.com
Message-ID: <1582ca51-8e46-4d24-9857-f9d4f8425b40@x1g2000prh.googlegroups.com>
Source record: 5089
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

On May 30, 10:26 pm, Jeffrey D Angus <jan...@socal.rr.com> wrote:
>
> Ooooh, he has a Breting 9. I have one of those at the shop I
> need to recap and make work again.

It lives again. Well, the only way I thinkit's a week end is if I get
to work on my own stuff once in a while.

Jeff

# 753. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-01 13:06:42 UTC
From: N2EY@aol.com
Message-ID: <7fbe5a7d-63b9-40d7-ad0c-e8f279768201@59g2000hsb.googlegroups.com>
Source record: 5090

On May 29, 9:34 am, Michael Coslo <m...@psu.edu> wrote:
> N...@aol.com wrote:
> > On May 28, 8:03 am, gwatts <gwa...@frontiernet.net> wrote:
> >> AF6AY wrote:

> >>> The do-gooders done did too much with all those
> >>> warnings and
> >>> attempts to protect us all from everything.

> > If a product is dangerous, why shouldn't it have warnings?
> > Particularly when there are known carcinogens and other
> > health hazards involved?

> > It's not being a "do-gooder" or "doing too much"
> > to discover hazards
> > and eliminate or contain them.

> I think it a matter of magnitude.

Not really. See below.

> Some items such as Benzene are pretty dangerous
> and have an established
> track record of making people sick. Those should go
> whenever possible.

Agreed.

> OTOH, the little bottle of Strip-X with it's foul stench is probably not
> going to cause anyone harm outside of self inflicted (i.e. suicide
> attempts)

But it *is* dangerous stuff, and should have adequate warnings,
shouldn't it?

What does

"do-gooder done did too much with all those warnings and
attempts to protect us all from everything."

really mean? Are there too many warnings on dangerous chemicals?

More important, do we really *know* that Strip-X isn't going to cause
anyone harm unless intentionally abused?

Did every user of the stuff do so in a "well-ventilated area"? I think
not.

> Of course, I'm not so sure if Strip-X was discontinued
> because of health
> concerns or that it just didn't work any more on new generations of
> enameled wire.

AFAIK, it worked on all enameled wire. Teflon isn't an "enamel".

> > Sure, not everyone who uses Strip-X will get cancer.
> > But some of the
> > components of it are known carcinogens, and a proven
> > hazard. More important,
> > we can't know ahead of time who the susceptible folks are.

> > More likely, they looked at the *possibility* of such a lawsuit, the
> > scientific evidence of the hazards of the ingredients, the limited
> > profit and
> > declining sales, and just stopped making the product.
>
> > Once a chemical is shown to be dangerous, the manufacturers
> > can't
> > claim ignorance anymore.

> > Since the formula for Strip-X appears to be in the public
> > domain,
> > anybody can make it and sell it. Would *you* be willing
> > to set up shop to make
> > it and sell it, with all the risks that entails, and the very limited
> > market for it?
>
> There you touch on the real issue with items like Strip-X. The
> manufacturing side. While I might have my little bottle that I get
> out a
> time or two during the day, the people making the stuff have
> exposure issues well beyond that.

Depending on the manufacturing process. The history of industry is
full of examples of people being slowly killed at work by exposure to
hazards. Asbestos, radium paint, carbon tet, MEK, all sorts of
wonderful stuff.

The fact that something doesn't kill everyone who gets near it doesn't
make it safe enough.

> My main point is that while we might not get much
> exposure, those who produce it just might be getting
> serious contact with nasty chemicals.

'zactly.

It's all about avoidable risk.

Another example:

Once upon a time, cars had single main hydraulic brake systems. The
master cylinder had one pump that fed all four wheel cylinders.

It was simple and effective, but a failure anywhere in the system (wheel cylinder, master cylinder, brake lines, etc.) meant total hydraulic brake system failure.

Then the "do-gooders" pushed for dual brake systems, on the theory that most single failures would leave half the brake system working, plus a warning system.

Critics said that the cost and complexity were too much, and that complete brake failure was very rare in then-modern cars with single systems.

The "do-gooders" won, and dual brake systems with warnings became the standard.

Was that excessive? I guess it depends on whether you've ever had the brake pedal go right to the floor at a critical moment.

73 de Jim, N2EY

# 754. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-01 17:24:51 UTC
From: Dave Heil <k8mn@frontiernet.net>
Message-ID: <PXA0k.4557$2g.4423@fe087.usenetserver.com>
Source record: 5091

The best product for stripping enamel wire is one which not many hobbyists will have around the home: a solder pot.

Foster Transformer in Cincinnati used this method for stripping enamel and tinning the ends of transformer leads simultaneously. All they did was do straighten out the leads and dip the wire ends into the pot for about five seconds.

Dave K8MN

## 755. Calibrator

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-02 00:11:52 UTC
From: AndyTao <22265737@qq.com>
Message-ID: <c23046d2-6d32-4002-81a1-8b6ce4238b5f@f24g2000prh.googlegroups.com>
Source record: 5092

Bench and portable calibrators Press, Temp, Voltage, current, Freq
http://www.ogogo123sina.cn/

# 756. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-02 01:54:52 UTC
From: N2EY@aol.com
Message-ID: <10881264-3520-48c0-ac6b-7386dd23e9e7@l42g2000hsc.googlegroups.com>
Source record: 5093

On Jun 1, 1:24 pm, Dave Heil <k...@frontiernet.net> wrote:
> The best product for stripping enamel wire is one which not many
> hobbyists will have around the home: a solder pot.

Yup. I've used them.

Of course someone might protest that the discussion is about doing the
job *chemically*....
>
> Foster Transformer in Cincinnati used this method for stripping
> enamel
> and tinning the ends of transformer leads simultaneously. All they > did
> was do straighten out the leads and dip the wire ends into the pot > for about five seconds.

Pretty much standard in the electronics industry, really. Faster and
less costly than Strip-X for production work.

At Southgate Radio, for multiple units, an improvised solder pot is
made by heating a cleaned-out tuna can full of solder splashes over a
propane torch or stove burner(with appropriate safety precautions).
For small jobs, a blob of solder on the 100 watt American Beauty iron
does the job.

Elecraft transceiver kits (except the K3) require that you wind
toroids and strip the wire ends. They recommend the solder-blob
method, and since the wire is relatively small you don't need a big
iron. My military-surplus Weller WCTPK kit does the job very well.

73 de Jim, N2EY

# 757. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-02 17:22:01 UTC
From: Dave Heil <k8mn@frontiernet.net>
Message-ID: <3%V0k.1887$nt1.1113@fe097.usenetserver.com>
Source record: 5094

N2EY@aol.com wrote:
> On Jun 1, 1:24 pm, Dave Heil <k...@frontiernet.net> wrote:
>> The best product for stripping enamel wire is one which not many
>> hobbyists will have around the home: a solder pot.
>
> Yup. I've used them.
>
> Of course someone might protest that the discussion is about doing the
> job *chemically*....

Chemically-schmemically. Do they want to remove enamel or discuss semantics?

>> Foster Transformer in Cincinnati used this method for stripping
>> enamel
>> and tinning the ends of transformer leads simultaneously. All they > did
>> was do straighten out the leads and dip the wire ends into the pot > for about five seconds.
>
> Pretty much standard in the electronics industry, really. Faster and
> less costly than Strip-X for production work.

I think I've already related the tale in r.r.a.p. that I had the President of Ideal Tool make a call on Foster with me. His plan was to sell one of the company's new abrasive stone type enamel removing machines. After the kindly chief engineer showed how Foster removed/tinned with the solder pot, the man from Ideal told me that he didn't believe there was much of a market for his machine.

> At Southgate Radio, for multiple units, an improvised solder pot is
> made by heating a cleaned-out tuna can full of solder splashes over a
> propane torch or stove burner(with appropriate safety precautions).
> For small jobs, a blob of solder on the 100 watt American Beauty iron
> does the job.

Waste not, want not. I think I'd just wait until the XYL isn't home and heat the can on a burner of the gas stove. Doesn't it sound like something which could go terribly, terribly wrong?

> Elecraft transceiver kits (except the K3) require that you wind
> toroids and strip the wire ends. They recommend the solder-blob
> method, and since the wire is relatively small you don't need a big
> iron. My military-surplus Weller WCTPK kit does the job very well.

I've often used a razor blade or X-acto knife to get the job done.

Dave K8MN

# 758. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-02 18:38:47 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g21enn$17ne$1@f04n12.cac.psu.edu>
Source record: 5095

N2EY@aol.com wrote:
> On May 29, 9:34 am, Michael Coslo <m...@psu.edu> wrote:
>> N...@aol.com wrote:
>>> On May 28, 8:03 am, gwatts <gwa...@frontiernet.net> wrote:
>>>> AF6AY wrote:
>
>>>>> The do-gooders done did too much with all those
>>>>> warnings and
>>>>> attempts to protect us all from everything.
>
>>> If a product is dangerous, why shouldn't it have warnings?
>>> Particularly when there are known carcinogens and other
>>> health hazards involved?
>
>>> It's not being a "do-gooder" or "doing too much"
>>> to discover hazards
>>> and eliminate or contain them.
>
>> I think it a matter of magnitude.
>
> Not really. See below.
>
>> Some items such as Benzene are pretty dangerous
>> and have an established
>> track record of making people sick. Those should go
>> whenever possible.
>
> Agreed.
>
>> OTOH, the little bottle of Strip-X with it's foul stench is probably not
>> going to cause anyone harm outside of self inflicted (i.e. suicide
>> attempts)
>
> But it *is* dangerous stuff, and should have adequate warnings,
> shouldn't it?

There's my magnitude issue. I'm in no way implying that there be no warning on the bottles. I am implying that it is a useful product, and legislating it out of existence, or just making it too much trouble for a company to produce is not a good thing.

We do have a system that is pretty good. The MSDS reports are pretty slick and non-sensational.

Of course, they won't fit on that little bottle! 8^)

I'd rather read that than something about what "The state of California knows" you know, those strange postings beside gasoline pumps? This product is know to the State of California as a carcinogen" type stuff.

I wonder how many people called up the state of California to talk about that?

> What does "do-gooder done did too much with all those warnings and
> attempts to protect us all from everything."
> really mean? Are there too many warnings on dangerous chemicals?

I don't mind the warnings too much as long as they are not stupid warnings. What I do mind is when a useful product goes away.

> More important, do we really *know* that Strip-X isn't going to cause
> anyone harm unless intentionally abused?

Or salted codfish for that matter? I know that sounds a little sarcastic, but the point is that there is a statistical correlation between large consumption of salted and smoked fish with stomach cancer.

> Did every user of the stuff do so in a "well-ventilated area"? I think
> not.

One can only give guidelines, not enforce them.

> Once upon a time, cars had single main hydraulic brake systems. The
> master cylinder had one pump that fed all four wheel cylinders.
>
> It was simple and effective, but a failure anywhere in the system
> (wheel cylinder, master cylinder, brake lines, etc.) meant total
> hydraulic brake system failure.
>
> Then the "do-gooders" pushed for dual brake systems, on the theory
> that most single failures would leave half the brake system working,
> plus a warning system.
>
> Critics said that the cost and complexity were too much, and that
> complete brake failure was very rare in then-modern cars with single
> systems.

> The "do-gooders" won, and dual brake systems with warnings became the
> standard.
>
> Was that excessive? I guess it depends on whether you've ever had the
> brake pedal go right to the floor at a critical moment.

For me at least, the comparison of mechanical with chemical issues is a little hard to work. I have long advocated such radical technology as strong roll cages, 5 point seat belts and fire suppression systems on automobiles if we want to get serious about safety.

On the other hand, I've silvered my telescope mirrors in my garage. This involves a litany of nasty stuff, from Silver nitrate to potassium hydroxide to nitric acid. (now that stuff is scary) And oddly enough, sucrose and citric acid. I'd hate to be not allowed to do such things because someone thought I might get hurt.

- 73 de Mike N3LI -

# 759. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-02 18:40:31 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g21eqv$17ne$2@f04n12.cac.psu.edu>
Source record: 5096

Dave Heil wrote:
> The best product for stripping enamel wire is one which not many
> hobbyists will have around the home: a solder pot.

I've used them. They work like a champ. I think we dipped them in flux
for a second too.

- 73 de Mike N3LI -

# 760. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-02 18:47:09 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g21f7d$119k$1@f04n12.cac.psu.edu>
Source record: 5097

Dave Heil wrote:
> N2EY@aol.com wrote:
>> On Jun 1, 1:24 pm, Dave Heil <k...@frontiernet.net> wrote:
>>> The best product for stripping enamel wire is one which not many
>>> hobbyists will have around the home: a solder pot.
>>
>> Yup. I've used them.
>>
>> Of course someone might protest that the discussion is about doing the
>> job *chemically*....
>
> Chemically-schmemically. Do they want to remove enamel or discuss
> semantics?

Never thought of it one way or the other. I suppose if I had to classify
it as something, I'de callit chemical. But I don't get why that would be
a complaint about th eprocess.

> I think I've already related the tale in r.r.a.p. that I had the
> President of Ideal Tool make a call on Foster with me. His plan was to
> sell one of the company's new abrasive stone type enamel removing
> machines. After the kindly chief engineer showed how Foster
> removed/tinned with the solder pot, the man from Ideal told me that he
> didn't believe there was much of a market for his machine.
>
>> At Southgate Radio, for multiple units, an improvised solder pot is
>> made by heating a cleaned-out tuna can full of solder splashes over a
>> propane torch or stove burner(with appropriate safety precautions).
>> For small jobs, a blob of solder on the 100 watt American Beauty iron
>> does the job.
>
> Waste not, want not. I think I'd just wait until the XYL isn't home and
> heat the can on a burner of the gas stove. Doesn't it sound like
> something which could go terribly, terribly wrong?

Yes it does. I did have the occasion to melt some lead for a
counterbalance for a telescope I made. I took a cast iron saucepan and
put the lead in it, and melted it over a Coleman stove outside the
garage. I was a little concerned while I did it, but it all turned okay.

I wonder if there is a specific metal the solder pots used. I don't know
if critical applications would have an issue with contamination or not.
Solder is a bit corrosive.

- 73 de Mike N3LI -

# 761. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-03 11:33:00 UTC
From: N2EY@aol.com
Message-ID: <d16f326a-d34e-4dac-9fe5-9315374b72f2@27g2000hsf.googlegroups.com>
Source record: 5098

On Jun 2, 1:22 pm, Dave Heil <k...@frontiernet.net> wrote:
> N...@aol.com wrote:
> > On Jun 1, 1:24 pm, Dave Heil <k...@frontiernet.net> wrote:

> > Of course someone might protest that the discussion
> > is about doing the job *chemically*....

> Chemically-schmemically.  Do they want to remove enamel
> or discuss semantics?

Some folks will argue just for the sake of arguing. And while they
will talk a lot about their experience of decades past, they'll not
say much about what they have actually done recently. Particularly in
terms of actually building their own ham rigs or operating on the ham
bands.

> >> All they did
> >> was do straighten out the leads and dip the wire ends
> >> into the pot for about five seconds.

> > Pretty much standard in the electronics industry, really. Faster > > and
> > less costly than Strip-X for production work.

> I had the
> President of Ideal Tool make a call on Foster with me.  His plan
> was to
> sell one of the company's new abrasive stone type enamel
> removing
> machines.  After the kindly chief engineer showed how Foster
> removed/tinned with the solder pot, the man from Ideal told me
> that he
> didn't believe there was much of a market for his machine.

ooops! Hadn't heard that one before!

> > At Southgate Radio, for multiple units, an improvised solder pot > > is
> > made by heating a cleaned-out tuna can full of solder splashes > > over a
> > propane torch or stove burner(with appropriate safety
> > precautions).
> > For small jobs, a blob of solder on the 100 watt American
> > Beauty iron does the job.

> Waste not, want not.

That's a key value at Southgate Radio. Also:

Use it up, wear it out
Make it do, or do without

> I think I'd just wait until the XYL isn't home and
> heat the can on a burner of the gas stove.

That's what I described.

>  Doesn't it sound like
> something which could go terribly, terribly wrong?

Not with "appropriate safety precautions".

> > Elecraft transceiver kits (except the K3) require that you wind
> > toroids and strip the wire ends. They recommend the solder-blob
> > method, and since the wire is relatively small you don't need a big
> > iron. My military-surplus Weller WCTPK kit does the job very well.
>
> I've often used a razor blade or X-acto knife to get the job done.

Me too, but it depends on whether a tinned wire is wanted.

Now when it comes to terminating a 37 conductor #14 Kerite cable...but
that's another story....

73 de Jim, N2EY

# 762. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-04 13:06:41 UTC
From: NoMoreSpam <Disgustedham@qrparci.org>
Message-ID: <48469361.30200@qrparci.org>
Source record: 5099

Michael Coslo wrote:

>
> I'd rather read that than something about what "The state of California
> knows" you know, those strange postings beside gasoline pumps? This
> product is know to the State of California as a carcinogen" type stuff.
>
> I wonder how many people called up the state of California to talk about
> that?
>
>
>> What does "do-gooder done did too much with all those warnings and
>> attempts to protect us all from everything."
>> really mean? Are there too many warnings on dangerous chemicals?
>
>
> I don't mind the warnings too much as long as they are not stupid
> warnings. What I do mind is when a useful product goes away.
>
>> More important, do we really *know* that Strip-X isn't going to cause
>> anyone harm unless intentionally abused?
>
> Or salted codfish for that matter? I know that sounds a little
> sarcastic, but the point is that there is a statistical correlation
> between large consumption of salted and smoked fish with stomach cancer.
>
>
>
Keep voting Democrat, and you'll insure that Government will protect you...at a
price!

# 763. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-04 13:56:52 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <Fax1k.14535$oA1.13062@fe105.usenetserver.com>
Source record: 5100

NoMoreSpam wrote:
> Michael Coslo wrote:
>
>>
>> I'd rather read that than something about what "The state of
>> California knows" you know, those strange postings beside gasoline
>> pumps? This product is know to the State of California as a
>> carcinogen" type stuff.
>>
>> I wonder how many people called up the state of California to talk
>> about that?
>>
>>
>>> What does "do-gooder done did too much with all those warnings and
>>> attempts to protect us all from everything."
>>> really mean? Are there too many warnings on dangerous chemicals?
>>
>>
>>
>> I don't mind the warnings too much as long as they are not stupid
>> warnings. What I do mind is when a useful product goes away.
>>
>>> More important, do we really *know* that Strip-X isn't going to cause
>>> anyone harm unless intentionally abused?
>>
>>
>> Or salted codfish for that matter? I know that sounds a little
>> sarcastic, but the point is that there is a statistical correlation
>> between large consumption of salted and smoked fish with stomach cancer.
>>
>>
>>
> Keep voting Democrat, and you'll insure that Government will protect
> you...at a price!

Better than voting Republican where you still pay the price, your
children and grandchildren continue to pay the price, and all the
protections go away under the guise of 'we big, rich business types have
to be able to make a profit!'

## 764. removing enamel

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-04 22:46:32 UTC
From: W3CQH <hsgorden@comcast.net>
Message-ID: <xdWdnSgRAPnchtrVnZ2dnUVZ_tHinZ2d@comcast.com>
Source record: 4951

Thanks to all who responded to the question, with all of your expertise and comments.

Best 73's, it turned out to be a very interesting thread.

## 765. Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-05 05:32:23 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <5oednfu5BfU1jdTVnZ2dnUVZ8sijnZ2d@pipex.net>
Source record: 4958

> The EU has regs that are essentially outlawing lead solder in
> electronics. Because the EU is such a big market, most electronics
> makers are following along, and rather than deal with both lead and no-
> lead solders, they're going all-no-lead. With all the problems lead-
> free electronic solders bring along.
>
> But IMHO the whole thing is wrong-headed. Lead in the environment is a
> problem, but the solution is recycling, not banning lead.
>
> How ironic is it that a major rework of a car's electronics will be
> done to eliminate a few ounces of lead-tin solder, while the car's
> battery contains many pounds of lead and acid?
==========

Indeed ,lead free solder does not flow that well even at elevated
temperatures ,
so I have stocked up on leaded solder (possibly sufficiently for the
rest of my home brewing life).

But the point is that electronic equipment having printed circuit boards
contain a very low percentage (weight wise) of solder. If that solder
contains lead any recycling effort to recover/isolate the lead will be
exceedingly costly. In the past printed circuit boards were pulverised
to recover the gold on 'contact fingers' through a chemical process ,
but apparently that is no longer viable.

So although there is very little lead in electronic equipment
manufactured with 60/40 or 63/37 leaded solder ,when equipment ends up
in a land fill the cumulative effect is bad ,poisoning ground water.

So it does make sense to go for lead free solder.

BTW : In the UK leaded solder is still available ,although no longer
from High Street retail outlets like Maplin Electronics .

Lead Acid Batteries have a large percentage of lead (weight wise) ,hence
recycling is commercially viable .

Frank GM0CSZ / KN6WH

## 766. Re: removing enamel

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-05 07:27:47 UTC
From: SamSvL <samsvl@nlr.nl>
Message-ID: <Xns9AB460023E7E9samsvlnlrnl@192.87.166.15>
Source record: 4952

"W3CQH" <hsgorden@comcast.net> wrote in
news:xdWdnSgRAPnchtrVnZ2dnUVZ_tHinZ2d@comcast.com:

> Thanks to all who responded to the question, with all of your
> expertise and comments.
>
> Best 73's, it turned out to be a very interesting thread.
>
>

Formic acid (CH2O2) works fine for me

Sam

## 767. Re: removing enamel

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-05 13:19:06 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <66863399-ead2-4e6a-95c2-e8f4d4d7b06f@k37g2000hsf.googlegroups.com>
Source record: 4953

On Jun 4, 5:46 pm, "W3CQH" <hsgor...@comcast.net> wrote:
> Thanks to all who responded to the question, with all of your expertise and
> comments.
>
> Best 73's,  it turned out to be a very interesting thread.

http://www.eraser.com/catpdf.cgi/Magnet.pdf?mode=download&catpdf_id=11

# 768. voltage comparator for MOSFET driver in HF CW TX?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-05 16:32:33 UTC
From: spamhog <n1jpr@hotmail.com>
Message-ID: <49921247-f01f-4054-924d-6205df5ddfde@b1g2000hsg.googlegroups.com>
Source record: 4954

I'm playing with 600V ex-PSU MOSFETs (with very high Ciss) as HF switching finals, with some success.

I'd like to put together a driver that takes sinusoidal input into a fast voltage comparator, and produce a variable pulse-width low-Z output that could be used to efficiently trim the output power.

With such a driver, a suitable slow data stream into a DAC could be used to generate a variable control voltage that could in turn cause the RF output to vary as to conveniently simulate ionospheric fading. (Just kidding. I promise).

I read specs of many possible ICs types but I am at loss as to which common and inexpensive types may be suitable, and found no examples of specific types used in that specific role.

I had klutzed with DC-offsetting a sinusoidal signal into an ugly nonlinear driver to that effect, but the idea of using a comparator is from Paul Harden N5AN (who is CCed):

http://www.aoc.nrao.edu/~pharden/hobby/_ClassDEF2.pdf

Any suggestions?

---

Also, did anyone press into HF service a standard suite of PWM and MOSFET driver ICs used in automotive applications?

I saw operating frequencies in the order of 400kHz, but with driver transition times in the 10-20ns range, which is already promising - although perhaps I would not try them on a MOSFET totempole at 10MHz, or at least not right away...

---

TIA!

Filippo N1JPR/I2

## 769. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-05 20:25:44 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <jZX1k.2010$nD3.912@newsfe15.lga>
Source record: 4955
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
> VoiceMax is really gaining momentum!
> Radio operators all over the world are enjoying the Voicemax
> advantage.
> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
> clear.
> What a concept!
>
> See what VoiceMax can do for you at
> http://www.telstar-electronics.com/voicemax.htm

What is the dB advantage of this vs. RF clipping for SSB?

# 770. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-05 21:56:07 UTC
From: N2EY@aol.com
Message-ID: <e0bdf3d7-33ad-4c3b-bfb0-b6e7e655f0b1@b1g2000hsg.googlegroups.com>
Source record: 4956

On Jun 2, 2:38 pm, Michael Coslo <m...@psu.edu> wrote:
> N...@aol.com wrote:
> > On May 29, 9:34 am, Michael Coslo <m...@psu.edu> wrote:
> >> N...@aol.com wrote:
> >>> On May 28, 8:03 am, gwatts <gwa...@frontiernet.net> wrote:
> >>>> AF6AY wrote:
>
> >>>>> The do-gooders done did too much with all those
> >>>>> warnings and
> >>>>> attempts to protect us all from everything.
>
> >>> If a product is dangerous, why shouldn't it have warnings?
> >>> Particularly when there are known carcinogens and other
> >>> health hazards involved?
>
> >>> It's not being a "do-gooder" or "doing too much"
> >>> to discover hazards
> >>> and eliminate or contain them.
>
> >> I think it a matter of magnitude.
>
> > Not really. See below.
>
> >> Some items such as Benzene are pretty dangerous
> >> and have an established
> >> track record of making people sick. Those should go
> >> whenever possible.
>
> > Agreed.
>
> >> OTOH, the little bottle of Strip-X with it's foul stench is probably not
> >> going to cause anyone harm outside of self inflicted (i.e. suicide
> >> attempts)
>
> > But it *is* dangerous stuff, and should have adequate warnings,
> > shouldn't it?
>
> There's my magnitude issue. I'm in no way implying that there be no
> warning on the bottles. I am implying that it is a useful product, and
> legislating it out of existence, or just making it too much trouble for
> a company to produce is not a good thing.

Something just occurred to me.

We don't *know* that Strip-X was discontinued because of health/safety/
environmental/"do-gooder" issues. That's pure speculation.

It's quite possible - in fact, probable - that the reason Strip-X was
discontinued was lack of sales. After all, the *professionals* use
solder pots, not chemicals. Amateurs who are in the know use solder
pots, or a solder blob.

I suspect that the market for Strip-X was so small it wasn't worth
producing any more.

> We do have a system that is pretty good. The MSDS reports are pretty
> slick and non-sensational.
>
> Of course, they won't fit on that little bottle! 8^)

And folks have to read them and understand them.

> I'd rather read that than something about what "The state of California
> knows" you know, those strange postings beside gasoline pumps? This
> product is know to the State of California as a carcinogen" type stuff.
>
> I wonder how many people called up the state of California to talk about
> that?

bwaahaahaaa

> > What does "do-gooder done did too much with all those warnings and
> > attempts to protect us all from everything."
> > really mean? Are there too many warnings on dangerous chemicals?
>
> I don't mind the warnings too much as long as they are not stupid
> warnings. What I do mind is when a useful product goes away.

But as I wrote, we don't *know* that such things got rid of Strip-X. I
say it was solder pots.

> > More important, do we really *know* that Strip-X isn't going to cause
> > anyone harm unless intentionally abused?
>
> Or salted codfish for that matter? I know that sounds a little
> sarcastic, but the point is that there is a statistical correlation
> between large consumption of salted and smoked fish with stomach cancer.

Correlation isn't causation. Unless a controlled study is done that
eliminates other variables, a causation is not proven. For example, it
could be that those who eat lots of salted and smoked fish also tend
to eat lots of something else, and it's the something else which is
the real cause.

The "known to California" jargon means such controlled studies have
been done.

> > Did every user of the stuff do so in a "well-ventilated area"? I think
> > not.

>
> One can only give guidelines, not enforce them.

Of course. And people have to read them!

> > Once upon a time, cars had single main hydraulic brake systems. The
> > master cylinder had one pump that fed all four wheel cylinders.

> > It was simple and effective, but a failure anywhere in the system
> > (wheel cylinder, master cylinder, brake lines, etc.) meant total
> > hydraulic brake system failure.

> > Then the "do-gooders" pushed for dual brake systems, on the theory
> > that most single failures would leave half the brake system working,
> > plus a warning system.

> > Critics said that the cost and complexity were too much, and that
> > complete brake failure was very rare in then-modern cars with single
> > systems.
> > The "do-gooders" won, and dual brake systems with warnings became the
> > standard.

> > Was that excessive? I guess it depends on whether you've ever had the
> > brake pedal go right to the floor at a critical moment.

> For me at least, the comparison of mechanical with chemical issues is a
> little hard to work.

Why? It's the same concept: reduction of avoidable risk.

The point is that the *professionals* who made the cars resisted
safety improvements that we now take for granted.

> I have long advocated such radical technology as
> strong roll cages, 5 point seat belts and fire suppression systems on
> automobiles if we want to get serious about safety.

A roll cage isn't needed if the car structure is built strong enough
(roof won't collapse if car rolls over)

True harnesses are a good idea, as is fire suppression.

> On the other hand, I've silvered my telescope mirrors in my garage. This
> involves a litany of nasty stuff, from Silver nitrate to  potassium
> hydroxide to nitric acid. (now that stuff is scary) And oddly enough,
> sucrose and citric acid. I'd hate to be not allowed to do such things
> because someone thought I might get hurt.

Hydroflouric acid is *really* nasty.

The Big Issue IMHO is whether a dangerous process can be made safer.
Is there a safer way to silver a telescope mirror?

There *is* a safer way to remove enamel from wire, and you get the
added bonus of a tinned wire. Why use a chemical at all?

---

Related topic:

The EU has regs that are essentially outlawing lead solder in electronics. Because the EU is such a big market, most electronics makers are following along, and rather than deal with both lead and no-lead solders, they're going all-no-lead. With all the problems lead-free electronic solders bring along.

But IMHO the whole thing is wrong-headed. Lead in the environment is a problem, but the solution is recycling, not banning lead.

How ironic is it that a major rework of a car's electronics will be done to eliminate a few ounces of lead-tin solder, while the car's battery contains many pounds of lead and acid?

73 de Jim, N2EY

## 771. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 04:35:00 UTC
From: cmdr buzz corey <cmdr-buzz-corey@mailcity.com>
Message-ID: <0881c8e8-0a85-41df-97e8-8ecdf767427a@m3g2000hsc.googlegroups.com>
Source record: 4957
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jun 5, 2:25 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> "Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
>
> news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
>
> > VoiceMax is really gaining momentum!
> > Radio operators all over the world are enjoying the Voicemax
> > advantage.
> > Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
> > clear.
> > What a concept!
>
> > See what VoiceMax can do for you at
> >http://www.telstar-electronics.com/voicemax.htm
>
> What is the dB advantage of this vs. RF clipping for SSB?

It is a splatter box add-on.

# 772. Re: voltage comparator for MOSFET driver in HF CW TX?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 14:00:05 UTC
From: NM0S <ai9e_qrp@yahoo.com>
Message-ID: <6497944b-05b2-4de8-b016-4cdbf6d4301c@y21g2000hsf.googlegroups.com>
Source record: 4959

Filippo -
You should reconsider trying to PWM your RF switching amplifier. If
you are running Class-E, changing the duty of the drive signal will
not affect your output power significantly, but will destroy your
efficiency if you deviate from 50% duty.

With Class-D power amp, you can PWM the drive to control output power,
but it is very stressful to the MOSFET. However, there is a way to do
it, see US patent 7092269.

Good luck, keep us updated.

73 - Dave NM0S

On Jun 5, 11:32 am, spamhog <n1...@hotmail.com> wrote:
> I'm playing with 600V ex-PSU MOSFETs (with very high Ciss) as HF
> switching finals, with some success.
>
> I'd like to put together a driver that takes sinusoidal input into a
> fast voltage comparator, and produce a variable pulse-width low-Z
> output that could be used to efficiently trim the output power.
>
> With such a driver, a suitable slow data stream into a DAC could be
> used to generate a variable control voltage that could in turn cause
> the RF output to vary as to conveniently simulate ionospheric fading.
> (Just kidding. I promise).
>
> I read specs of many possible ICs types but I am at loss as to which
> common and inexpensive types may be suitable, and found no examples of
> specific types used in that specific role.
>
> I had klutzed with DC-offsetting a sinusoidal signal into an ugly
> nonlinear driver to that effect, but the idea of using a comparator is
> from Paul Harden N5AN (who is CCed):
>
> http://www.aoc.nrao.edu/~pharden/hobby/_ClassDEF2.pdf
>
> Any suggestions?
>
> ---------------------------------------------
>
> Also, did anyone press into HF service a standard suite of PWM and
> MOSFET driver ICs used in automotive applications?
>
> I saw operating frequencies in the order of 400kHz, but with driver

> transition times in the 10-20ns range, which is already promising -
> although perhaps I would not try them on a MOSFET totempole at 10MHz,
> or at least not right away...
>
> ---
>
> TIA!
>
> Filippo N1JPR/I2

## 773. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 14:39:21 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <x_b2k.116$yO4.44@newsfe06.lga>
Source record: 4960

"Highland Ham" <abcgm0csz.kn6whxyz@dsl.pipex.com> wrote in message
news:5oednfu5BfU1jdTVnZ2dnUVZ8sijnZ2d@pipex.net...

> exceedingly costly. In the past printed circuit boards were pulverised to
> recover the gold on 'contact fingers' through a chemical process , but
> apparently that is no longer viable.

We have been seeing signs all over for people buying gold jewelry. This
past weekend my wife knocked some talk out of one of these guys, and they
said they still do recover gold from PCBs, but right now, buying old jewelry
does result in a source of gold for about 1/3 the market price.

..

# 774. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 15:13:40 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g2bk74$upg$1@f04n12.cac.psu.edu>
Source record: 4961

N2EY@aol.com wrote:
> On Jun 2, 2:38 pm, Michael Coslo <m...@psu.edu> wrote:
>> N...@aol.com wrote:
>>> On May 29, 9:34 am, Michael Coslo <m...@psu.edu> wrote:
>>>> N...@aol.com wrote:
>>>>> On May 28, 8:03 am, gwatts <gwa...@frontiernet.net> wrote:
>>>>>> AF6AY wrote:
>>>>>>> The do-gooders done did too much with all those
>>>>>>> warnings and
>>>>>>> attempts to protect us all from everything.
>>>>> If a product is dangerous, why shouldn't it have warnings?
>>>>> Particularly when there are known carcinogens and other
>>>>> health hazards involved?
>>>>> It's not being a "do-gooder" or "doing too much"
>>>>> to discover hazards
>>>>> and eliminate or contain them.
>>>> I think it a matter of magnitude.
>>> Not really. See below.
>>>> Some items such as Benzene are pretty dangerous
>>>> and have an established
>>>> track record of making people sick. Those should go
>>>> whenever possible.
>>> Agreed.
>>>> OTOH, the little bottle of Strip-X with it's foul stench is probably not
>>>> going to cause anyone harm outside of self inflicted (i.e. suicide
>>>> attempts)
>>> But it *is* dangerous stuff, and should have adequate warnings,
>>> shouldn't it?
>> There's my magnitude issue. I'm in no way implying that there be no
>> warning on the bottles. I am implying that it is a useful product, and
>> legislating it out of existence, or just making it too much trouble for
>> a company to produce is not a good thing.
>
> Something just occurred to me.
>
> We don't *know* that Strip-X was discontinued because of health/safety/
> environmental/"do-gooder" issues. That's pure speculation.
>
> It's quite possible - in fact, probable - that the reason Strip-X was
> discontinued was lack of sales. After all, the *professionals* use
> solder pots, not chemicals. Amateurs who are in the know use solder
> pots, or a solder blob.
>

> I suspect that the market for Strip-X was so small it wasn't worth
> producing any more.
>
>> We do have a system that is pretty good. The MSDS reports are pretty
>> slick and non-sensational.
>>
>> Of course, they won't fit on that little bottle! 8^)
>
> And folks have to read them and understand them.

The MSDS

>
>> I'd rather read that than something about what "The state of California
>> knows" you know, those strange postings beside gasoline pumps? This
>> product is know to the State of California as a carcinogen" type stuff.
>>
>> I wonder how many people called up the state of California to talk about
>> that?
>
> bwaahaahaaa
>
>>> What does "do-gooder done did too much with all those warnings and
>>> attempts to protect us all from everything."
>>> really mean? Are there too many warnings on dangerous chemicals?
>> I don't mind the warnings too much as long as they are not stupid
>> warnings. What I do mind is when a useful product goes away.
>
> But as I wrote, we don't *know* that such things got rid of Strip-X. I
> say it was solder pots.
>
>>> More important, do we really *know* that Strip-X isn't going to cause
>>> anyone harm unless intentionally abused?
>> Or salted codfish for that matter? I know that sounds a little
>> sarcastic, but the point is that there is a statistical correlation
>> between large consumption of salted and smoked fish with stomach cancer.
>
> Correlation isn't causation. Unless a controlled study is done that
> eliminates other variables, a causation is not proven. For example, it
> could be that those who eat lots of salted and smoked fish also tend
> to eat lots of something else, and it's the something else which is
> the real cause.

Water! That's it... I know when I've eaten salt cod, I get awfully
thirsty. FOr the technical among us, that is DiHydrogen Monoxide.

> The "known to California" jargon means such controlled studies have
> been done.
>
>>> Did every user of the stuff do so in a "well-ventilated area"? I think
>>> not.

>> One can only give guidelines, not enforce them.
>
> Of course. And people have to read them!
>
>>> Once upon a time, cars had single main hydraulic brake systems. The
>>> master cylinder had one pump that fed all four wheel cylinders.
>
>>> It was simple and effective, but a failure anywhere in the system
>>> (wheel cylinder, master cylinder, brake lines, etc.) meant total
>>> hydraulic brake system failure.
>
>>> Then the "do-gooders" pushed for dual brake systems, on the theory
>>> that most single failures would leave half the brake system working,
>>> plus a warning system.
>
>>> Critics said that the cost and complexity were too much, and that
>>> complete brake failure was very rare in then-modern cars with single
>>> systems.
>>> The "do-gooders" won, and dual brake systems with warnings became the
>>> standard.
>
>>> Was that excessive? I guess it depends on whether you've ever had the
>>> brake pedal go right to the floor at a critical moment.
>
>> For me at least, the comparison of mechanical with chemical issues is a
>> little hard to work.
>
> Why? It's the same concept: reduction of avoidable risk.
>
> The point is that the *professionals* who made the cars resisted
> safety improvements that we now take for granted.
>
>> I have long advocated such radical technology as
>> strong roll cages, 5 point seat belts and fire suppression systems on
>> automobiles if we want to get serious about safety.
>
> A roll cage isn't needed if the car structure is built strong enough
> (roof won't collapse if car rolls over)
>
> True harnesses are a good idea, as is fire suppression.
>
>> On the other hand, I've silvered my telescope mirrors in my garage. This
>> involves a litany of nasty stuff, from Silver nitrate to potassium
>> hydroxide to nitric acid. (now that stuff is scary) And oddly enough,
>> sucrose and citric acid. I'd hate to be not allowed to do such things
>> because someone thought I might get hurt.
>
> Hydroflouric acid is *really* nasty.

I've used it once. That's just about enough, IMO.

> The Big Issue IMHO is whether a dangerous process can be made safer.
> Is there a safer way to silver a telescope mirror?

Not specifically using silver. More common these days is sending the mirror away to have an aluminum or other coating flashed on it in a vacuum chamber. Pretty safe, but not many people are going to do that at home. I did it mainly for the experience, and to do an extended field check of the quality of the mirror. Checking out a mirror is not unlike checking out an antenna. Usually we do a star test on an uncoated mirror. We install everything in the tube, and look at stars to determine if the work we did was acceptable. But just like propagation affects how an antenna appears to work or not work, the sky conditions can affect how images look in the eyepiece. So multiple sessions are best, but no one wants to wait a long time, so most people check it out once, put in a fudge factor for how they think the seeing will be, then ship it out for aluminizing, and hope they guessed right. Sometimes they don't guess right.

I gave my mirror almost a year worth of test. I knew it was a veery good mirror after a month, but then I just continued the experiment to see how long the silver would last, since they are very fragile surfaces.

> There *is* a safer way to remove enamel from wire, and you get the
> added bonus of a tinned wire. Why use a chemical at all?

Just need to interject that solder pots aren't completely benign.

> Related topic:
>
> The EU has regs that are essentially outlawing lead solder in
> electronics. Because the EU is such a big market, most electronics
> makers are following along, and rather than deal with both lead and no-
> lead solders, they're going all-no-lead. With all the problems lead-
> free electronic solders bring along.
>
> But IMHO the whole thing is wrong-headed. Lead in the environment is a
> problem, but the solution is recycling, not banning lead.

Agreed. There are ways to remove most all the lead from circuit boards during a recycling process. Electronics can be designed and built with an eye towards recycling; easy disassembly, etc.

On the lead replacements, I have an old solder information book. Lots of the new replacement metals are shown in it with examples of why those metals aren't used. They were considered bad contaminants.

> How ironic is it that a major rework of a car's electronics will be
> done to eliminate a few ounces of lead-tin solder, while the car's
> battery contains many pounds of lead and acid?

Didn't think about it before, but now that you mention it, it is kinda dumb.

- 73 de Mike N3LI -

# 775. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 15:36:54 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g2blin$urq$1@f04n12.cac.psu.edu>
Source record: 4962

Highland Ham wrote:
>> The EU has regs that are essentially outlawing lead solder in
>> electronics. Because the EU is such a big market, most electronics
>> makers are following along, and rather than deal with both lead and no-
>> lead solders, they're going all-no-lead. With all the problems lead-
>> free electronic solders bring along.
>>
>> But IMHO the whole thing is wrong-headed. Lead in the environment is a
>> problem, but the solution is recycling, not banning lead.
>>
>> How ironic is it that a major rework of a car's electronics will be
>> done to eliminate a few ounces of lead-tin solder, while the car's
>> battery contains many pounds of lead and acid?
> ==========
>
>
> Indeed ,lead free solder does not flow that well even at elevated
> temperatures ,
> so I have stocked up on leaded solder (possibly sufficiently for the
> rest of my home brewing life).
>
> But the point is that electronic equipment having printed circuit boards
> contain a very low percentage (weight wise) of solder. If that solder
> contains lead any recycling effort to recover/isolate the lead will be
> exceedingly costly.

I think that machinery can be developed to handle lead removal, we
already have ways of getting the solder onto those boards in rapid fashion.

I think we aren't looking at it in the right way. Changing over is going
to cost - probably big time. We are going to have to put up with
increased failure rates, whether through solder joint failure, or
reduced component life due to added heat stress.

After all, if lead free solders were the best way to go, that's what we
would be using. So we'll be retooling and spending that money for an
inferior product. Maybe Devo was right!

And, we're saying that this new lead free solder is going to be safe to
dump in landfills. M'kay, if they say so.....

- 73 de Mike N3LI -

## 776. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 16:33:32 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <74684ba1-b92a-4a70-acb1-9f699e75fbc8@y38g2000hsy.googlegroups.com>
Source record: 4963
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jun 5, 3:25 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> "Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
>
> news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
>
> > VoiceMax is really gaining momentum!
> > Radio operators all over the world are enjoying the Voicemax
> > advantage.
> > Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
> > clear.
> > What a concept!
>
> > See what VoiceMax can do for you at
> >http://www.telstar-electronics.com/voicemax.htm
>
> What is the dB advantage of this vs. RF clipping for SSB?

The compression ratio of VoiceMax is fixed at 15:1 with distortion
levels well below 1%.
I suggest you read this for clarification...
http://en.wikipedia.org/wiki/Audio_level_compression

# 777. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 20:47:26 UTC
From: laura halliday <marsgal42@hotmail.com>
Message-ID: <92419105-6fbe-4dbf-b971-7454304c514f@27g2000hsf.googlegroups.com>
Source record: 4964
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jun 5, 4:26 am, Telstar Electronics <briangrif...@sbcglobal.net>
wrote:
> VoiceMax is really gaining momentum!
> Radio operators all over the world are enjoying the Voicemax
> advantage.
> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
> clear.
> What a concept!
>
> See what VoiceMax can do for you athttp://www.telstar-electronics.com/voicemax.htm

Here we go again!

Laura Halliday VE7LDH "Non sequitur. Your ACKS are
Grid: CN89mg uncoordinated."
ICBM: 49 16.05 N 122 56.92 W - Nomad the Network Engineer

## 778. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 21:17:28 UTC
From: james <george@washington.edu>
Message-ID: <57aj44516jdqbjs8cte07430ojlqg9jsab@4ax.com>
Source record: 4965
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
On Thu, 5 Jun 2008 16:25:44 -0400, "Tio Pedro"
<radioconnection@cox.net> wrote:

|
|"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
|news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
|> VoiceMax is really gaining momentum!
|> Radio operators all over the world are enjoying the Voicemax
|> advantage.
|> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
|> clear.
|> What a concept!
|>
|> See what VoiceMax can do for you at
|> http://www.telstar-electronics.com/voicemax.htm
|
|What is the dB advantage of this vs. RF clipping for SSB?
|
|
|----------------------

RF Clipping is superior to audio compression in SSB transmission. RF
clipping will provide about 6dB improvement over audio compression
alone.

james
```

## 779. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-06 21:19:59 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <cSh2k.1791$js1.1369@newsfe24.lga>
Source record: 4966
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"james" <george@washington.edu> wrote in message
news:57aj44516jdqbjs8cte07430ojlqg9jsab@4ax.com...

> |----------------------
>
> RF Clipping is superior to audio compression in SSB transmission. RF
> clipping will provide about 6dB improvement over audio compression
> alone.
>
> james

Rhetorical question :)

## 780. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 06:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1212818701@panix.com>
Source record: 4967
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

# 781. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 12:53:44 UTC
From: N2EY@aol.com
Message-ID: <3487cb32-9ceb-40ee-bde5-f7a3abff8280@l42g2000hsc.googlegroups.com>
Source record: 4968

On Jun 5, 1:32 am, Highland Ham <abcgm0csz.kn6wh...@dsl.pipex.com>
wrote:
(N2EY wrote):
> > The EU has regs that are essentially outlawing lead solder in
> > electronics. Because the EU is such a big market, most electronics
> > makers are following along, and rather than deal with both lead and no-
> > lead solders, they're going all-no-lead. With all the problems lead-
> > free electronic solders bring along.
>
> > But IMHO the whole thing is wrong-headed. Lead in the environment is a
> > problem, but the solution is recycling, not banning lead.
>
> > How ironic is it that a major rework of a car's electronics will be
> > done to eliminate a few ounces of lead-tin solder, while the car's
> > battery contains many pounds of lead and acid?
>
> ==========
>
> Indeed ,lead free solder does not flow that well even at elevated
> temperatures ,
> so I have stocked up on leaded solder (possibly sufficiently for the
> rest of my home brewing life).

I think a lot of electronics folks have done the same.

> But the point is that electronic equipment having printed circuit boards
> contain a very low percentage (weight wise) of solder. If that solder
> contains lead any recycling effort to recover/isolate the lead will be
> exceedingly costly. In the past printed circuit boards were pulverised
> to recover the gold on 'contact fingers' through a chemical process ,
> but apparently that is no longer viable.

Whether it's viable depends on the rules. Here in the USA, a number of
states require a deposit (usually five cents) on beverage containers.
That deposit is typically far more than the intrinsic worth of the
metal, glass or plasti in the container, but that's not the point.
Instead, the deposit makes it worthwhile to collect and recycle the
containers, keeping them out of the trash stream and reducing litter.
Why couldn't there be such a deposit on electronics?

> So although there is very little lead in electronic equipment
> manufactured with 60/40 or 63/37 leaded solder ,when equipment ends up
> in a land fill the cumulative effect is bad ,poisoning ground water.

All sorts of things wind up in landfills that are far worse than the small amount of lead solder in electronics. Are the metals in lead-free solder all benign?

> So it does make sense to go for lead free solder.

I think there are better ways to keep lead out of the trash.

> BTW : In the UK leaded solder is still available ,although no longer
> from High Street retail outlets like Maplin Electronics .
>
> Lead Acid Batteries have a large percentage of lead (weight wise) ,hence
> recycling is commercially viable .

But does that guarantee no lead or cadmium containing batteries of any kind wind up in landfills? Just one car battery in a stream is far more contamination than a very large number of PC boards.

IMHO, the big problem is that electronics of all kinds is becoming a throw-away item, with short useful lifespan, but recycling lags far behind. The problems of lead-free solder may make the lifespan shorter, and so the disposal problem worse.

73 de Jim, N2EY

# 782. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 14:25:53 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <av2l44hnj14g7ql42fmh210a2h2ika3gms@4ax.com>
Source record: 4969

On Thu, 5 Jun 2008 14:56:07 -0700 (PDT) N2EY@aol.com wrote:

>How ironic is it that a major rework of a car's electronics will be
>done to eliminate a few ounces of lead-tin solder, while the car's
>battery contains many pounds of lead and acid?

I think you'll find that auto batteries are already VERY commonly
recycled, for exactly this reason.

-
---
Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA
---

# 783. Re: voltage comparator for MOSFET driver in HF CW TX?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 16:01:56 UTC
From: spamhog <n1jpr@hotmail.com>
Message-ID: <d5dfebae-5615-4600-b76b-adb21c44b97e@z66g2000hsc.googlegroups.com>
Source record: 4970

On Jun 6, 2:00 pm, NM0S <ai9e_...@yahoo.com>
wrote:

> If you are running Class-E, changing the
> duty of the drive signal will not affect your
> output power significantly, but will destroy
> your efficiency if you deviate from 50% duty.

Thank you, Dave!

My understanding was that duty cycle would set
output even in class E.

I like to gather silicon from the recycling heap,
and although I have IRF510's, my current victim is
a SK2545, wrung out of a PSU, Pd=40W, Vdss=600V,
and Ciss=1.3nF (!) not easy to stress - actually,
that's exactly why I opted for that class of
device, only partly fit for purpose, but
forgiving, and easy to find.

I already wrung several watts of RF out of at
10MHz it with decidedly ugly and bad drivers which
I did not manage to run in switch mode. They
heated up a lot, but the final got sufficiently
"overdriven" to partly go switchmode, and did not
heat up that much.

I have a totempole ready with complementary BJTs
from a printer driver (2SA2037 / 2SC5694, 60V, 7A,
300MHz), they need .85Vbe to go into saturation.

Ample current is needed to quickly charge and
discharge the MOSFET gate, I reckon it'd take ~
250mA, hence the driver'd better be switching too
rather than overheat in linear mode. So, duty
cycle aside, I need a clean square wave.

MOSFET gate must be swung from <3V to >10V, driver
bases need >8.5Vpp.

I could use a 74HC240 line driver for VXO and amp,
enough current for a IFR510, surely not for Ciss>
1000pF, but OK for the complementary pair.

Yet a comparator would indeed be ideal. With it I
could one day also futz with duty and see by

myself what happens... [read John 20:29].

Now, off to read US patent 7092269! :-) After all, I am shooting for class D, not E. I want to design a frequency flexible matching and filter network to cover many bands with few components, perhaps resorting to old fashioned variable capacitors, E would be way too complicated anyway, and efficient output throttling would be nice to have.

Does anyone have a suggestion for a common and inexpensive type that works well throughout HF?

## 784. Re: voltage comparator for MOSFET driver in HF CW TX?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 16:14:18 UTC
From: spamhog <n1jpr@hotmail.com>
Message-ID: <3b0d583c-2ca2-4fa2-a24f-060562bc8de6@p25g2000hsf.googlegroups.com>
Source record: 4971

Now I see my error w.r.t. class E:
by moving the switching actions along the cycle
you can't possibly time them for the [I=0, V=0] points.

Still ruminating on class D.

## 785. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 16:41:10 UTC
From: Erich <n6fd@mchsi.com>
Message-ID: <GSy2k.144122$TT4.14488@attbi_s22>
Source record: 4972

One of the biggest problems I have with the lead free solder is that over time it tends to grow tin whiskers. Then it shorts out to adjacent pads. Current reliability requirements are to encapsulate all the solder joints with epoxy. This is painful and really causes problems with rework.

No-lead; a feel-good solution to a non-problem.

Erich N6FD

# 786. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 20:05:21 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <2654f6b2-2faf-4747-875d-67915226407b@s33g2000pri.googlegroups.com>
Source record: 4973

From: N2EY@aol.com on Thurs, Jun 5 2008 2:56 pm
>On Jun 2, 2:38 pm, Michael Coslo <m...@psu.edu> wrote:
>> N...@aol.com wrote:
>> > On May 29, 9:34?am, Michael Coslo <m...@psu.edu> wrote:
>> >> N...@aol.com wrote:
>> >>> On May 28, 8:03 am, gwatts <gwa...@frontiernet.net> wrote:
>> >>>> AF6AY wrote:

>> >> OTOH, the little bottle of Strip-X with it's foul stench is probably not
>> >> going to cause anyone harm outside of self inflicted (i.e. suicide
>> >> attempts)
>>
>> > But it *is* dangerous stuff, and should have adequate warnings,
>> > shouldn't it?
>>
>> There's my magnitude issue. I'm in no way implying that there be no
>> warning on the bottles. I am implying that it is a useful product, and
>> legislating it out of existence, or just making it too much trouble for
>> a company to produce is not a good thing.
>
>Something just occurred to me.
>
>We don't *know* that Strip-X was discontinued because of health/safety/
>environmental/"do-gooder" issues. That's pure speculation.

Sigh...so written communication from the manufacturer is 'no good?!?'

Oh, yes, it must be so. "Southgate Radio" (that big, big maker of
radios) hasn't issued a Proclamation yet to 'confirm' the fact.

>It's quite possible - in fact, probable - that the reason Strip-X was
>discontinued was lack of sales.

No one seems to have checked out General Cement and its line of
products. They've been in business for over 75 years, have regular
product displays and stocks at NON-ham electronics stores. Many of
those products have LOW sales rates. Their original product, an
acetate-based cement (originally intended to repair paper speaker
cones) is still in the current catalog (but under a different
product number than the original). Who 'repairs speaker cones'
these days? One can expect them to carry it for nothing other
than sentimental or nostalgic reasons given that there are MANY
kinds of cements available in NON-electronic stores that could do
the job as easy and probably better. It is, as acetate-based, no
different than hobby cements such as 'Testors Cement' also made
in the same city by by Testor Chemical Company (also still in

business for about the same time). It is incredibly cheap to produce, costing no more than the original LEAD-based tube both used to come in. Yes, youngsters, Testors Cement and GC chemicals and every toothpaste made by anyone once came in LEAD tubes! [horrors! contamination!]

One thing that you youngsters ASSUME is that insulation on magnet wire has ALWAYS been the same to this day. Not true, but it is impossible to tell some of the middle-aged knowitalls so (they passed a code test in their teen years and have been extra class a long time...harumpphhh).

At the introduction of 'wire-wrap' techniques (both in telco infrastructure and in prototype digital PCB card construction), roughly around the beginning 1960s, magnet wire manufacturers were beginning to use LOWER-TEMPERATURE-MELTING insulation of various kinds. "Solder-Eze" is one brand name that was very successful...there are dozens of others. Look in any Kings, Times or Belden full catalog.

PVC (PolyVinylChloride) insulation has been used on wire at the end of WWII. PVC has a low melting point (relatively speaking). MIL-W- specs of nylon-jacketed PVC wire was standard US military wire in aircraft of the late 1940s. The nylon jacket adds resistance to abrasion and has a higher melting point. Relatively easy to mechanically strip nylon-jacketed PVC and it does not 'collapse' from melting if soldered too long using manual wiring. With petroleum more abundant after WWII, other polymers were developed and used, notably Teflon (TetraFlouroethylene) which was relatively indestructable compared to predecessor insulations.

Hughes Aircraft Company El Segundo Division (made radars and fire control systems for military aircraft) had surplus nylon-jacketed PVC wire at their employee's store. I used some of that to nearly-completely rewire the electrical system of my restored 1953 Austin-Healey sports car in 1958. Much better wire than the cotton-cloth covered gutta percha insulation of the original English wiring.

>After all, the *professionals* use
>solder pots, not chemicals. Amateurs who are in the know use solder
>pots, or a solder blob.

REAL "amateurs who are in the know" got their materials experience IN the electronics INDUSTRY. Especially those who who were involved in materials testing and design of both electronic and physical construction.

By the way, this "Southgate Radio" you keep mentioning doesn't seem to exist as anything but the name of a store up in Canada. There IS a Southgate Amateur Radio Club in the Southgate section of London, England...but their website doesn't seem to have

much on magnet wire stripping techniques. Lots of new solid-state
radio information there for radio amateurs, though.

>I suspect that the market for Strip-X was so small it wasn't worth
>producing any more.

SPECULATION! SPECULATION! When did the 'radio manufacturer' from
'Southgate Radio' ever visit GC or get a PROFESSIONAL chemical lab
to analyze what was in there? BTW, how many radios does 'Southgate
Radio' make each year?

>> We do have a system that is pretty good. The MSDS reports are pretty
>> slick and non-sensational.
>>
>> Of course, they won't fit on that little bottle! 8^)
>
>And folks have to read them and understand them.

Go to any food market in the USA to see lots of BIG labels of
contents, percentages, and FDA information on EVERY packaged
food product.

>> I'd rather read that than something about what "The state of California
>> knows" you know, those strange postings beside gasoline pumps? This
>> product is know to the State of California as a carcinogen" type stuff.
>>
>> I wonder how many people called up the state of California to talk about
>> that?
>
>bwaahaahaaa

Tsk, tsk, easterners back in PA making fun of the most populous
state in the USA...and once the capital of the aerospace industry
in the USA. It is also the state with the MOST licensed radio
amateurs in the USA.

>> > What does "do-gooder done did too much with all those warnings and
>> > attempts to protect us all from everything."
>> > really mean? Are there too many warnings on dangerous chemicals?
>>
>> I don't mind the warnings too much as long as they are not stupid
>> warnings. What I do mind is when a useful product goes away.
>
>But as I wrote, we don't *know* that such things got rid of Strip-X. I
>say it was solder pots.

If you DO say that, then you are NOT an "amateur in the know."

LOWER TEMPERATURE magnet wire insulation used in the electronics
industry enabled newer techniques of stripping insulation and
the use of 'melting by solder pot' VERY SMALL VOLUME production
technique...or connections by mechanical means that both broke
through insulation and made electrical connection. The "push-

down" rapid connection system for telcos is an example. Much, much quicker to do, less labor intensive. Look at many of the multiple-wire cable connectors that use a mechanical crimping system to join every wire at once and also make an electrical connection.

The predominant method of stripping magnet wire in the electronics industry is the abrasive brush method which ALSO works for small gauge insulated conventional wire. They don't fool around with labor-intensive, one-of-a-kind techniques of construction used by hobbyists.

Manufacturers of electric motors might use propane gas torches to BURN off stator windings' magnet wire, heating it enough to bare the copper and to solder to it in one operation. Same thing for some (but not all) rotor windings. Electrical motor makers use magent wire by the MILE and make them at relatively low cost...and for very long life in high-torque AC powered applications.

>The "known to California" jargon means such controlled studies have
>been done.

Spoken by Pennsylvanians without ever once doing any 'controlled studies' of any subject involving California. Sigh...

>> For me at least, the comparison of mechanical with chemical issues is a
>> little hard to work.
>
>Why? It's the same concept: reduction of avoidable risk.
>
>The point is that the *professionals* who made the cars resisted
>safety improvements that we now take for granted.

AFTER a whole bunch of litigious actions by those who were trying to make personal profit via civil suits.

As an AMATEUR about automobiles, I put seat belts in the 2-door Plymouth I came out west back in 1956. Bought a kit in 1957, put them in the front seats myself. Did that with my restored Austin-Healey, too. Made SENSE to do so...even though never involved in any collision or 'roll-over.' The 1961 Chevy Impala convertible that followed had seat belts already installed.

Aren't we talking WAY OFF the subject of WIRE STRIPPING here and about times that few of you actually LIVED and EXPERIENCED?

>> On the other hand, I've silvered my telescope mirrors in my garage. This
>> involves a litany of nasty stuff, from Silver nitrate to potassium
>> hydroxide to nitric acid. (now that stuff is scary) And oddly enough,
>> sucrose and citric acid. I'd hate to be not allowed to do such things
>> because someone thought I might get hurt.
>

>Hydroflouric acid is *really* nasty.
>
>The Big Issue IMHO is whether a dangerous process can be made safer.
>Is there a safer way to silver a telescope mirror?

Yes, there is, and it results in a mirror with fewer optical aberrations on its surface. It is deposition of metal (usually aluminum) in a vacuum. My lead-man at EOS, Doug McFarland, was an amateur telescope maker (and licensed radio amateur) and got his mirrors 'silvered' that way for his 6 and 10 inch refractors.

>There *is* a safer way to remove enamel from wire, and you get the
>added bonus of a tinned wire. Why use a chemical at all?

Try stripping some #42 enameled magnet wire made around 1950 by 'solder pot' or abrasive techniques and the end product will not be very good. That old enamel covering will harden with time. CHEMICAL means to loosen the enamel WITHOUT any copper damage is the COMMON SENSE approach to getting an electrical connection. It is fast, inexpensive, and, IF USED WITH APPROPRIATE CAUTION, safe enough in an enivornment that is FULL of MANY DANGERS.

Do you wear thermal-insulating mittens or gloves when handling a soldering iron? YOU SHOULD...IT IS 'GOOD FOR YOU.' Soldering irons operate at tip temperatures high enough to inflict very serior BURNS on the skin.

Do you inhale fumes from rosin flux while soldering? DON'T DO IT, WEAR SELF-CONTAINED BREATHING APPARATUS! 'IT'S GOOD FOR YOU!' Who knows what other FUMES are given off when soldering? Has anyone done 'controlled tests of human dangers' from that? Better hurry up to catch up with the DO-GOODERS!

Do you wear PROTECTIVE GLASSES when drilling wood or metal? BETTER DO THAT! 'IT IS GOOD FOR YOU!' Who knows when you get clumsy and don't hold the work tight and pieces fly off, possibly impacting your precious EYES! Ya gots to have PROTECTIVE EYEGLASSES!

Do you wear self-contained breathing appartus when spraying paint? BETTER DO IT, 'IT IS GOOD FOR YOU!' All that toluene and acetone and other DANGEROUS hydrocarbon compounds are set free and will CONTAMINATE YOU AND THE ENTIRE PLANET!

Do you wear protective gloves when working with sheet metal or any substance that can make a sharp edge that would PIERCE YOUR SKIN? BETTER DO IT, IT IS GOOD FOR YOU! We can't have you in GREAT DANGER from open wound infections!

Oh, oh, oh, THE WORLD IS FULL OF *DANGERS*! Protect yourself from EVERYTHING that might, possibly, maybe damage your precious body...or neighborhood...or city...or the planet.

DON'T DO ANYTHING. Just sit at your computer (with non-CRT flat-screen display so you won't be in danger of X-RAYS from those old CRT displays) and make Do-Gooder noises...especially to those of us who spent a lifetime IN the electronics industry.

Keep your 'Southgate Radio' company SAFE.

AF6AY

# 787. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-07 23:51:06 UTC
From: Mike Silva <snarflemike@yahoo.com>
Message-ID: <0c7c43bf-6b1f-4de8-899f-040488b32083@k30g2000hse.googlegroups.com>
Source record: 4974

On Jun 7, 12:41 pm, Erich <n...@mchsi.com> wrote:
> One of the biggest problems I have with the lead free solder is that
> over time it tends to grow tin whiskers.  Then it shorts out to adjacent
> pads.  Current reliability requirements are to encapsulate all the
> solder joints with epoxy.  This is painful and really causes problems
> with rework.
>
> No-lead; a feel-good solution to a non-problem.
>
> Erich N6FD

http://nepp.nasa.gov/WHISKER/ (check out the photo gallery)

Wonder if the EU is going to pick up the eventual world-wide tab?

# 788. SolderSmoke Podcast 85

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 06:59:14 UTC
From: "bill.meara@gmail.com" <bill.meara@gmail.com>
Message-ID: <21199019-9187-44df-b2c6-96a1294af3f2@25g2000hsx.googlegroups.com>
Source record: 4975

SolderSmoke!
A SHOW FOR ELECTRONICS HOMEBREWERS!

CHECK OUT THE NEW SolderSmoke BLOG: http://soldersmoke.blogspot.com

Listen at: http://www.soldersmoke.com

SolderSmoke #85

June 8, 2008

Echo-QSO with WA6ARA!
Phoenix lands on Mars.
Beacon operations.
Adrian Weiss, W0RSP. FB QRP Author.
Need correspondent for Flea at MIT.
Understanding balanced modulators.
Dan's accident (Dan's Small Parts).
Hendricks Cap Kit.
"Hot Iron" Journal of The Constructor's Club
The Woodpecker.
MAILBAG (Return of the GONG!):
W6DWF
KC0PEI on "IP Telepathy"
Mark Z on a crank-up Pocket Pixie.
Ramakrishnan in Singapore.
Niels PE1OIT on Robert E. Pease.
Jerry NR5A: Cursed with Beacon Madness.
Echolink QSO with Mike, WA6ARA.

Tired of listening to Black Sabbath or Wagner on your I-Pod?
Wouldn't you like to be able to carry with
you the kinds of ham radio conversations that you
listen to while in your radio shack? Tune in to SolderSmoke!

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them downloaded to your MP-3 player, and listen to
them at your convenience. To subscribe, just cut and
paste this URL into your I-poder (or similar)
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If you don't have an MP3 player you can just go to the
site below and listen to the latest program (and
earlier editions) using the audio software on your
computer.

http://www.soldersmoke.com

All the programs are available here.

I hope you enjoy the program. Please send us feedback.

73 from Rome
Bill M0HBR N2CQR CU2JL
http://www.gadgeteer.us

## 789. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 11:02:11 UTC
From: LRKSFAG <LRKSFAG.2919c0d@radiobanter.com>
Message-ID: <LRKSFAG.2919c0d@radiobanter.com>
Source record: 4978

Brother's great, I top you and I are also top-Jin top。'ASAHI'
(http://www.nsk2008.cn/see/247.html)'IJK'
(http://www.nsk2008.cn/see/249.html)'THK'
(http://www.nsk2008.cn/see/248.html)'KOYO'
(http://www.nsk2008.cn/see/246.html)

--
LRKSFAG

# 790. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 13:07:56 UTC
From: N2EY@aol.com
Message-ID: <20426597-294b-4fb6-af8c-db0ab8823c54@k37g2000hsf.googlegroups.com>
Source record: 4976

On Jun 7, 12:41 pm, Erich <n...@mchsi.com> wrote:
> One of the biggest problems I have with the lead free solder is that
> over time it tends to grow tin whiskers. Then it shorts out to adjacent
> pads. Current reliability requirements are to encapsulate all the
> solder joints with epoxy. This is painful and really causes problems
> with rework.

Perhaps the idea is to eliminate rework and repair. Remember the
slogan "Ending is better than mending"?

> No-lead; a feel-good solution to a non-problem.

I disagree!

I think it's the wrong solution to real problem.

73 de Jim, N2EY

# 791. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 13:16:15 UTC
From: N2EY@aol.com
Message-ID: <d0d9d392-5ad5-4f39-a25e-1e2309e68036@k30g2000hse.googlegroups.com>
Source record: 4977

On Jun 7, 10:25 am, Jim Adney <jad...@vwtype3.org> wrote:
> On Thu, 5 Jun 2008 14:56:07 -0700 (PDT) N...@aol.com wrote:
>
> >How ironic is it that a major rework of a car's electronics will be
> >done to eliminate a few ounces of lead-tin solder, while the car's
> >battery contains many pounds of lead and acid?
>
> I think you'll find that auto batteries are already VERY commonly
> recycled, for exactly this reason.

Here in Pennsylvania, there's a "core charge" ($7? might have gone up) if you try to buy a new car battery without an old one to trade in. Besides being an incentive to recycle, it gives the auto-parts folks a chance to put the old battery alongside the new one and make sure it's the right size.

But the main point is this: Not all car batteries are recycled; some do get into the waste stream. The same is true of other lead-acid and ni-cad cells (cadmium is a heavy metal, too). Yet those things are not outlawed. Instead, recycling and education programs are set up to keep the lead, cadmium and acid out of the environment.

IMHO, such recycling for discarded electronics is a better solution than banning lead-tin solder.

73 de Jim, N2EY

# 792. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 17:46:32 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <1ec8d1b4-5099-41e5-a36d-89c383f01fb1@a32g2000prf.googlegroups.com>
Source record: 4979

On Jun 7, 4:51 pm, Mike Silva <snarflem...@yahoo.com> wrote:
> On Jun 7, 12:41 pm, Erich <n...@mchsi.com> wrote:
>
> > One of the biggest problems I have with the lead free solder is that
> > over time it tends to grow tin whiskers. Then it shorts out to adjacent
> > pads. Current reliability requirements are to encapsulate all the
> > solder joints with epoxy. This is painful and really causes problems
> > with rework.
>
> > No-lead; a feel-good solution to a non-problem.
>
> > Erich N6FD
>
> http://nepp.nasa.gov/WHISKER/(check out the photo gallery)
>
> Wonder if the EU is going to pick up the eventual world-wide tab?

EU doesn't have to. RoHS (Reduction of Hazardous Substances) is an
in-country (European) specification that covers a LOT of different
substances. In one way RoHS is no different than the FCC
specification
that forbids MARKETING of receivers than can listen to cellular
telephone
frequencies...or the way older specification that stated TV sets sold
in the
USA must be capable of tuning in UHF TV channels...or the FCC
specification about linear RF amplifiers that can cover CB that aren't
allowed to be sold IN the USA.

RoHS is NOT an international specification. Manufacturers who sell
ONLY in the USA and don't care to enter the European (or RoHS-member)
markets aren't obliged in any way to obey RoHS standards. USA DoD
contracts on electronics can use lead-bearing solders, no problem.

NASA used CONFORMAL COATINGS or encapsulation on spacecraft
electronics in the beginning of the 1960s. NOT for any sort of 'tin-
whisker'
problems but for the fact that microgravity environments all all kinds
of small
or large junk to float around freely. It MIGHT be that some teeny
conductive
junk could short out traces on a PCB in space. Hardly likely in an
earth
environment with gravity all the time. Those same conformal coatings
were

later found to inhibit the growth of CERTAIN metal whiskers (tin is not the only one). Except for one potting compound allowed back in the 1960s, such coatings and pottings were not epoxoids. The others were closer to offshoots of silicone elastomers and could be reworked.

There are all sorts of coating compounds available now. Emerson & Cuming built their long-running business of providing all kinds of polymer compounds for the electronics industry. Those aren't cheap. No such products are.

"Tin whisker" problems take a LONG time to show up. Usually it takes a half year for the first such whiskers' start to become visible under 100x magnification. Repeated heating-cooling tends to hasten such growth (of a sort of crystaline form of tin) but such studies aren't quite complete yet. But, once started, the growth can accelerate. Even that is not speedy.

Thanks to MARKETING folks, there has been a lot of hysteria about this "tin-whisker" thing generated and picked up by all who have no experience in such things. A conformal coating will inhibt whisker growth. Even an ordinary varnish used on wood surfaces. I'd avoid the green 'solder-mask' stuff found on PCB assemblies which are used to prevent excess solder during wave- and reflow-soldering; it is tough stuff and much harder to remove if put on soldered pads/lands via additional coatings. I'd avoid lacquers because they leave a lot of stubborn ash behind if one MUST 'rework' something...despite their easy application and quick drying time and nice appearance after application.

73, Len AF6AY

## 793. Re: removing enamel

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 18:00:14 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <3ee78e5f-32ba-489c-a940-a602a0ba4965@l28g2000prd.googlegroups.com>
Source record: 4980

On Jun 5, 6:19 am, Telstar Electronics <briangrif...@sbcglobal.net>
wrote:
> On Jun 4, 5:46 pm, "W3CQH" <hsgor...@comcast.net> wrote:
>
> > Thanks to all who responded to the question, with all of your expertise and
> > comments.
>
> > Best 73's, it turned out to be a very interesting thread.
>
> http://www.eraser.com/catpdf.cgi/Magnet.pdf?mode=download&catpdf_id=11

Seen those in action. But, be prepared for significant STICKER SHOCK
if you
want to buy one. Get Eraser's Price List for some knock-yer-socks-off
costs.

Compare that to a $3 bottle of Strip-X from GC two decades ago...which
could last a HOBBYIST for a decade.

This forum is for HOBBYISTS, not manufacturers. If I want to use
abrasive methods of removing magnet wire coatings, I'll just rip off a
quarter of a small square of emery finishing paper (used in painting
furniture) and use that for a couple of months of intense coil
building. Costs maybe a dime for that.

73, Len AF6AY

# 794. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 20:37:25 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <oeidnS6g_Kz639HVRVnyggA@pipex.net>
Source record: 4981

> Whether it's viable depends on the rules. Here in the USA, a number of
> states require a deposit (usually five cents) on beverage containers.
> That deposit is typically far more than the intrinsic worth of the
> metal, glass or plasti in the container, but that's not the point.
> Instead, the deposit makes it worthwhile to collect and recycle the
> containers, keeping them out of the trash stream and reducing litter.
> Why couldn't there be such a deposit on electronics?
==========
In the Netherlands and other EU countries all electrical goods are
subjected to a 'prepaid removal fee' This variable fee is payable on
purchase ,be it an electric toothbrush ,a microwave oven or a TV set
,computer ,printer etc. It means that upon disposal the unit can be
taken to any retailer who is obliged to dispose of the equipment in a
responsible way(recycle yard)

Also spent alkaline,Nicad,NiMH ,any type of battery can be put in a
container at any retailer including supermarkets who are selling these
batteries , even if you do not intend to buy batteries at that time.

In the UK they are lagging behind with these measures.

Frank GM0CSZ / KN6WH

# 795. Re: Lead free solder , was : REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-08 22:44:28 UTC
From: N2EY@aol.com
Message-ID: <380d3f8d-557b-4799-bb07-a9924dad5f12@z72g2000hsb.googlegroups.com>
Source record: 4982

On Jun 8, 4:37 pm, Highland Ham <abcgm0csz.kn6wh...@dsl.pipex.com>
wrote:
(N2EY wrote):
> > Here in the USA, a number of states require a
> > deposit (usually five cents) on beverage containers.
> > That deposit is typically far more than the intrinsic worth of the
> > metal, glass or plasti in the container, but that's not the point.
> > Instead, the deposit makes it worthwhile to collect and
> > recycle the
> > containers, keeping them out of the trash stream and
> > reducing litter.
> > Why couldn't there be such a deposit on electronics?

> ====================================
> In the Netherlands and other EU countries all electrical goods are
> subjected to a 'prepaid removal fee' This variable fee is
> payable on
> purchase ,be it an electric toothbrush ,a microwave oven
> or a TV set
> ,computer ,printer etc. It means that upon disposal the unit
> can be
> taken to any retailer who is obliged to dispose of the
> equipment in a
> responsible way(recycle yard)
>
> Also spent alkaline,Nicad,NiMH ,any type of battery
> can be put in a
> container at any retailer including supermarkets who
> are selling these
> batteries , even if you do not intend to buy batteries at that time.

That's close to what I'm talking about. Seems to me that's a better
solution than demanding no lead-containing solder.

> In the UK they are lagging behind with these measures.

Here in the USA, some retailers (Home Depot, Staples, Pep Boys)
have done similar things for batteries, motor oil, printer cartridges,
compact flourescent lamps, cell phones and some other items.
In some cases
it's a government regulation, in others it's a way to get you into
the store, and in others it's just a desire to do the right thing
rather
than being forced to do it.

The idea of building in the disposal cost up-front is a good one, IMHO, because it reveals the true cost of the item, not just the immediate cost.

73 de Jim, N2EY

## 796. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-09 13:25:33 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <86661d25-63a3-4c05-8938-a2beab33a577@w7g2000hsa.googlegroups.com>
Source record: 4983
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
On Jun 6, 4:17 pm, james <geo...@washington.edu> wrote:
> On Thu, 5 Jun 2008 16:25:44 -0400, "Tio Pedro"
>
> <radioconnect...@cox.net> wrote:
>
> ||"Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
>
> |news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
> |> VoiceMax is really gaining momentum!
> |> Radio operators all over the world are enjoying the Voicemax
> |> advantage.
> |> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
> |> clear.
> |> What a concept!
> |>
> |> See what VoiceMax can do for you at
> |>http://www.telstar-electronics.com/voicemax.htm
> |
> |What is the dB advantage of this vs. RF clipping for SSB?
> |
> |
> |----------------------
>
> RF Clipping is superior to audio compression in SSB transmission. RF
> clipping will provide about 6dB improvement over audio compression
> alone.
>
> james

James is correct... that the RF clipping technique is somewhat more
effective. What he fails to mention is that it's more complex... and
not easily installed into an existing radio. RF clipping also
exihibits substantially more distortion. The VoiceMax installs
easily... and provides tangible results.
```

## 797. SM0VPO Homepage update

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-09 16:11:29 UTC
From: Harry Lippitz <johnsmith@micro$oft.com>
Message-ID: <RCc3k.8307$R_4.6750@newsb.telia.net>
Source record: 4984

Hi all,

I have documented about 250 of my hamradio (and other)
projects, from antennas, filters, control, transmitters,
receivers, and ..... loads more.

Harry's Homebrew Homepages are to be found at:
http://web.telia.com/~u85920178/
1) Select subject area (eg. projects), at the top of the screen
2) select the type of project (TX, TX, PSU, etc).
3) choose a project from the left panel.

Latest projects are:

DIY Transformers
http://web.telia.com/~u85920178/power/diy_transformers.htm
(G�r-det-sj�lv transformat�rer)
Yes, I have found a source of re-windable transformers, and they are CHEAP.
Here is how you re-wind them.

Diode Switching Basics
http://web.telia.com/~u85920178/data/diode_switching_01.htm
Practical info and ideas using the diode as a switch:
- Signal switch
- Wide-range VCO
- Diode-switched intercom
- RF TX/RX switching
(Currently being translated into Svenska som artikel f�r SSAs tidningen QTC)

Other projects include:

7dB Colinear Antenna for VHF
http://web.telia.com/~u85920178/antennas/7db-colinear.htm
Colinear antenna for 145MHz. 10dB more than my old 1/4-wave.

Alternative power:
http://web.telia.com/~u85920178/power/invert1_00.htm
How to generate high power AC, from 50 Watts to 8kW

Simple receivers.
http://web.telia.com/~u85920178/rx/regen2.htm
Ideal for the novice, or people like me who just love 'em

TV transmitter:
http://web.telia.com/~u85920178/tx/tv_tx_02.htm
One boxer - one TV chanel shared with neighbours
10 neighbours = 10 channels, and still only one box per house

(only illegal to get caught)

Need 6.3vAC + 250vDC for that valve rig?
http://web.telia.com/~u85920178/use/tubepsu.htm
All uses readily available components

Want a valve rig?
TX = http://web.telia.com/~u85920178/tx/2tubetx.htm
RX = http://web.telia.com/~u85920178/rx/tube-rx.htm

Educational:
Synthesiser basics = http://web.telia.com/~u85920178/conv/syn-info.htm
Synthesiser trainer = http://web.telia.com/~u85920178/use/synth-00.htm

Got some EPROMs?
Make ae EPROM burner = http://web.telia.com/~u85920178/eprom/eprom-01.htm
AF Sine generator = http://web.telia.com/~u85920178/eprom/epromosc.htm

R/C Models:
http://web.telia.com/~u85920178/use/rc_enc_02.htm
Analogue cntrol unit, up to 9 proportional channels
(Even via 2m, GSM, 446MHz, 433MHz, etc)

These were just a few examples of the projects available. Currently building a 50pf + 50pf + 50pf variable capacitor for a new HF receiver. Uses PCBs. PCB foil patterns given for most projects at http://web.telia.com/~u85930032/. Sorry, no software for my homebrew computer at http://web.telia.com/~u85920178/use/analcom.htm

Best regards from Harry
oeieio@hotmail.com

# 798. PS: SM0VPO Homepage update

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-09 16:13:09 UTC
From: Harry Lippitz <johnsmith@micro$oft.com>
Message-ID: <pEc3k.8308$R_4.6786@newsb.telia.net>
Source record: 4985

No membership fees
No software installation
No registration
No age limit

BR H

## 799. WA2EBY MOSFET amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-09 16:25:17 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <fMCdnSqUW7nyxNDVnZ2dnUVZ_vqdnZ2d@comcast.com>
Source record: 4986

I came across Mike Dossor's mosfet hf amp in the 3/99 QST and am interested in using it as part of a mobile psk station. Anyone out there built this? Specifically, I'm looking for substitutes for the heatsink which is apparently no longer available and generally any hints, tips, gotchas... Thanks in advance.

gary

## 800. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-09 23:53:50 UTC
From: cmdr buzz corey <cmdr-buzz-corey@mailcity.com>
Message-ID: <a409a457-1ce2-44f9-99f7-c7328b8c1d55@d45g2000hsc.googlegroups.com>
Source record: 4987
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jun 9, 7:25 am, Telstar Electronics <briangrif...@sbcglobal.net>
wrote:
> The VoiceMax installs
> easily... and provides tangible results.

Lots of splatter immediately upon installation.

## 801. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-10 11:54:07 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <764dffe2-e6e0-46d4-9031-cd6ba5cf848e@34g2000hsh.googlegroups.com>
Source record: 4988
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jun 9, 6:53 pm, cmdr buzz corey <cmdr-buzz-co...@mailcity.com>
wrote:
> On Jun 9, 7:25 am, Telstar Electronics <briangrif...@sbcglobal.net>
> wrote:
>
> > The VoiceMax installs
> > easily... and provides tangible results.
>
> Lots of splatter immediately upon installation.

Actually, if adjusted correctly... no splatter... and 100% constant
modulation.
www.telstar-electronics.com

# 802. Re: removing enamel

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-10 12:04:41 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <edcc21e5-66c9-47e0-87f7-3685356d5e42@l64g2000hse.googlegroups.com>
Source record: 4989

On Jun 8, 1:00 pm, AF6AY <LenAnder...@ieee.org> wrote:
> On Jun 5, 6:19 am, Telstar Electronics <briangrif...@sbcglobal.net>
> wrote:
>
> > On Jun 4, 5:46 pm, "W3CQH" <hsgor...@comcast.net> wrote:
>
> > > Thanks to all who responded to the question, with all of your expertise and
> > > comments.
>
> > > Best 73's, it turned out to be a very interesting thread.
>
> >http://www.eraser.com/catpdf.cgi/Magnet.pdf?mode=download&catpdf_id=11
>
> Seen those in action.  But, be prepared for significant STICKER SHOCK
> if you
> want to buy one.  Get Eraser's Price List for some knock-yer-socks-off
> costs.
>
> Compare that to a $3 bottle of Strip-X from GC two decades ago...which
> could last a HOBBYIST for a decade.
>
> This forum is for HOBBYISTS, not manufacturers.  If I want to use
> abrasive methods of removing magnet wire coatings, I'll just rip off a
> quarter of a small square of emery finishing paper (used in painting
> furniture) and use that for a couple of months of intense coil
> building.  Costs maybe a dime for that.
>
> 73, Len  AF6AY

Stop being so cheap Len... and do it the right way... lol

## 803. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 13:44:19 UTC
From: james <george@washington.edu>
Message-ID: <i8lv44d54cbviahpbctun3h843r3467m3d@4ax.com>
Source record: 4990
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
On Mon, 9 Jun 2008 06:25:33 -0700 (PDT), Telstar Electronics
<briangriffey@sbcglobal.net> wrote:

|On Jun 6, 4:17ï¿½pm, james <geo...@washington.edu> wrote:
|> On Thu, 5 Jun 2008 16:25:44 -0400, "Tio Pedro"
|>
|> <radioconnect...@cox.net> wrote:
|>
|> ||"Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
|>
|> |news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
|> |> VoiceMax is really gaining momentum!
|> |> Radio operators all over the world are enjoying the Voicemax
|> |> advantage.
|> |> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
|> |> clear.
|> |> What a concept!
|> |>
|> |> See what VoiceMax can do for you at
|> |>http://www.telstar-electronics.com/voicemax.htm
|> |
|> |What is the dB advantage of this vs. RF clipping for SSB?
|> |
|> |
|> |----------------------
|>
|> RF Clipping is superior to audio compression in SSB transmission. RF
|> clipping will provide about 6dB improvement over audio compression
|> alone.
|>
|> james
|
|James is correct... that the RF clipping technique is somewhat more
|effective. What he fails to mention is that it's more complex... and
|not easily installed into an existing radio. RF clipping also
|exihibits substantially more distortion. The VoiceMax installs
|easily... and provides tangible results.
|----------------

Actually as easy to design an RF Clipper as an audio compressor. True
it is a bit more difficult to install. Audio clippers can be external
to the transmitter and simpler to install and operate. A RF Clipper
will install as easily as your internal audio compressor.
```

Personally I would take RF clipping over Audio compression any day with SSB transmissions. If the post filters are good in enough RF clipping, there is not significant difference in distortion.

james

## 804. Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 17:54:06 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <4jU3k.209778$ng7.171642@en-nntp-05.dc1.easynews.com>
Source record: 4991

I've been playing around with some homebrew superhet radios, and I'm finding that a significant amount of energy ends up at my 1st IF frequency that seems to be coming from the LO. While I expect to see energy from LO+/-IF end up at IF, of course, I've checked the LO+/-IF spurs (the LO is coming from a PLL-based synthesizer), and in general it seems that a lot more energy ends up at the IF than what the spurs alone would suggest. I remember a talk I attended where the presenter mention that one of the biggest problems with building receivers was "the LO getting into the IF," so I'm thinking this is what he meant? Are there other less obvious paths for the LO getting into the IF than just the LO+/-IF spurs?

The signal right at the IF eventually gets turned into DC and hence filtered out, so in theory it doesn't really matter that much, but in practice with very weak signals eventually the IF feedthru is stronger than the weak signals, so it limits how much amplification I can provide and hence limits the ultimate sensitivity of the receiver.

Thanks,
---Joel Koltner

## 805. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 18:58:44 UTC
From: dplatt@radagast.org
Message-ID: <4sj5i5-0no.ln1@radagast.org>
Source record: 4992

In article <4jU3k.209778$ng7.171642@en-nntp-05.dc1.easynews.com>,
Joel Koltner <zapwireDASHgroups@yahoo.com> wrote:

>that a significant amount of energy ends up at my 1st IF frequency that seems
>to be coming from the LO. While I expect to see energy from LO+/-IF end up at
>IF, of course, I've checked the LO+/-IF spurs (the LO is coming from a
>PLL-based synthesizer), and in general it seems that a lot more energy ends up
>at the IF than what the spurs alone would suggest. I remember a talk I
>attended where the presenter mention that one of the biggest problems with
>building receivers was "the LO getting into the IF," so I'm thinking this is
>what he meant? Are there other less obvious paths for the LO getting into the
>IF than just the LO+/-IF spurs?
>
>The signal right at the IF eventually gets turned into DC and hence filtered
>out, so in theory it doesn't really matter that much, but in practice with
>very weak signals eventually the IF feedthru is stronger than the weak
>signals, so it limits how much amplification I can provide and hence limits
>the ultimate sensitivity of the receiver.

Local-oscillator "blowthrough" is almost inevitable in non-balanced mixers. Even in single- and double-balanced mixers it's fairly common - it's an indication of less-than-perfect balance. Commercial DBMs usually quote an IF-isolation spec. For example, the popular Mini-Circuits SBL-1 mixer seems to have LO-to-IF isolations of anywhere from better than 65 dB (at HF) down to around 30 dB (at UHF). If you're trying to tune a weak signal (say, 80 or 90 dB weaker than the LO signal) then the residual LO feedthrough can cause the sort of swamping you're seeing.

Homebrew DBMs with hand-wound toroids, and less-than-well-matched diode sets may have significantly worse LO-to-IF isolation.

With diode-and-transformer DBMs, performance can degrade significantly if the mixer ports don't "look into" a nice broadband 50-ohm impedance. If, for example, you connect the IF port directly to a bandpass filter, the filter's impedance at the LO frequency is likely to be very much different thatn 50 ohms, and this may affect LO feedthrough.

The higher-performance superhet designs I've seen, generally take care to ensure that each mixer port sees the proper termination impedance. In the case of the LO port, the easiest way is to generate a stronger-than-necessary LO signal (maybe 13 dBm) and then feed it to the mixer through a 50-ohm pad (6 dB in this case).

In the case of the RF and IF ports, you can either use a resistive pad with modest attenuation (perhaps 3 dB), or use a diplexer. For the IF port you might want to feed the mixer into a common-gate or common-base broadband amplifier stage, run at a current level which gives it a 50-ohm input impedance... and then feed the output of this amp to your IF bandpass filter.

I've seen one fairly expensive device (a Tek spectrum analyzer) which had horrendous RF-spur problems. Turns out that its front end uses a simple non-balanced diode mixer with essentially no RF-to-IF or LO-to-IF isolation. The LO-to-IF isolation isn't a problem due to the nature of the analyzer design... but the analyzer uses a relatively low swept-IF frequency range, and the incoming RF signals can blow right through and be detected as if they were IF mixing products. It's an OK analyzer for bench testing of many radios, but is pretty much useless for trying to look at VHF over-the-air signals.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

# 806. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 19:08:52 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <e55dff05-720e-4c5f-950e-c7e0889f6ff5@56g2000hsm.googlegroups.com>
Source record: 4993

On 11 Jun, 18:54, "Joel Koltner" <zapwireDASHgro...@yahoo.com> wrote:
> I've been playing around with some homebrew superhet radios, and I'm finding
> that a significant amount of energy ends up at my 1st IF frequency that seems
> to be coming from the LO.  While I expect to see energy from LO+/-IF end up at
> IF, of course, I've checked the LO+/-IF spurs (the LO is coming from a
> PLL-based synthesizer), and in general it seems that a lot more energy ends up
> at the IF than what the spurs alone would suggest.  I remember a talk I
> attended where the presenter mention that one of the biggest problems with
> building receivers was "the LO getting into the IF," so I'm thinking this is
> what he meant?  Are there other less obvious paths for the LO getting into the
> IF than just the LO+/-IF spurs?
>
> The signal right at the IF eventually gets turned into DC and hence filtered
> out, so in theory it doesn't really matter that much, but in practice with
> very weak signals eventually the IF feedthru is stronger than the weak
> signals, so it limits how much amplification I can provide and hence limits
> the ultimate sensitivity of the receiver.
>
> Thanks,
> ---Joel Koltner

Screening is the best solution. Put the various stages in separate
screened enclosures.

Leon

# 807. shoes 4us shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/144977471/ )

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 20:08:41 UTC
From: michael <cnbbiz032@gmail.com>
Message-ID: <f23be950-37d4-4c5c-81cf-fbf86d850583@q24g2000prf.googlegroups.com>
Source record: 4994

Please chat with me by cnbbiz2008@hotmail.com to get the price and more photos, we take paypal payment $28/pairs as payment. please see the photo album below for our product list.

shoes ARMANI shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/134489149/ )

shoes bally shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/140329386/ )

shoes 4us shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/144977471/ )

shoes bape shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/130680706/)

shoes BURBERRY shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/134395893/ )

shoes ca shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/xinpaodao.2235855/144102223/ )

shoes chanel shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/131078679/ )

shoes Converse shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/nikeallstar#p2 )

shoes Clarks shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/nikeallstar#p1 )

shoes Lee shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/nikeallstar#p1 )

sandle Crocs sandle paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/huayuexiehang/153324391/ )

shoes dunk shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/8fzjlyl/)

shoes D&g shoes paypal payment $28/pairs cnbbiz2008@hotmail.com ( http://photo.163.com/photos/llz800728111/130680801/ )

shoes DIESEL shoes paypal payment $28/pairs cnbbiz2008@hotmail.com
( http://photo.163.com/photos/nikeallstar#p1 )

shoes DIOR shoes paypal payment $28/pairs cnbbiz2008@hotmail.com
( http://photo.163.com/photos/llz800728111/153489067/ )

shoes DSQUARED shoes paypal payment $28/pairs
cnbbiz2008@hotmail.com ( http://photo.163.com/photos/tt83234/140318831/#p2)

shoes DC shoes paypal payment $28/pairs cnbbiz2008@hotmail.com
( http://photo.163.com/photos/tt83234/140318831/#p2 )

## 808. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 20:36:55 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <75671283-a0ce-469c-a9b0-37b1bc451672@m45g2000hsb.googlegroups.com>
Source record: 4995
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
On Jun 11, 8:44 am, james <geo...@washington.edu> wrote:
> On Mon, 9 Jun 2008 06:25:33 -0700 (PDT), Telstar Electronics
>
> <briangrif...@sbcglobal.net> wrote:
>
> |On Jun 6, 4:17 pm, james <geo...@washington.edu> wrote:
> |> On Thu, 5 Jun 2008 16:25:44 -0400, "Tio Pedro"
> |>|> <radioconnect...@cox.net> wrote:
>
> |>
> |> ||"Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
> |>
> |> |news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
> |> |> VoiceMax is really gaining momentum!
> |> |> Radio operators all over the world are enjoying the Voicemax
> |> |> advantage.
> |> |> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
> |> |> clear.
> |> |> What a concept!
> |> |>
> |> |> See what VoiceMax can do for you at
> |> |>http://www.telstar-electronics.com/voicemax.htm
> |> |
> |> |What is the dB advantage of this vs. RF clipping for SSB?
> |> |
> |> |
> |> |----------------------
> |>
> |> RF Clipping is superior to audio compression in SSB transmission. RF
> |> clipping will provide about 6dB improvement over audio compression
> |> alone.
> |>
> |> james
> |
> |James is correct... that the RF clipping technique is somewhat more
> |effective. What he fails to mention is that it's more complex... and
> |not easily installed into an existing radio. RF clipping also
> |exihibits substantially more distortion. The VoiceMax installs
> |easily... and provides tangible results.
> |----------------
>
> Actually as easy to design an RF Clipper as an audio compressor. True
> it is a bit more difficult to install. Audio clippers can be external
```

> to the transmitter and simpler to install and operate. A RF Clipper
> will install as easily as your internal audio compressor.
>
> Personally I would take RF clipping over Audio compression any day
> with SSB transmissions. If the post filters are good in enough RF
> clipping, there is not significant difference in distortion.
>
> james

But I was under the impression that RF clippers only work on SSB?...
and the installation involves tearing into the IF section?

## 809. TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 20:37:36 UTC
From: andrew cuomo <control@control.com>
Message-ID: <ord054hr1qdqk2bn1728o7trdk6cq85vqa@4ax.com>
Source record: 4996

No more usenet news for RoadRunner users as of June 23. You have to sign up with a pay service.

For questions call Time Warner central: 203-328-0600.

Press 2 to get the "Office of the President". Stay on the line to talk to the "Customer Care Advocate."

A nice person will take your message. They even say they will look into it and call back.

## 810. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 20:46:48 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9ABAA08623FC3VeebleFetzer@127.0.0.1>
Source record: 4997

control@control.com (andrew cuomo) wrote in
news:ord054hr1qdqk2bn1728o7trdk6cq85vqa@4ax.com:

> No more usenet news for RoadRunner users as of June 23. You have to
> sign up with a pay service.

There are free USENET providers, and some very cheap ones.

http://www.motzarella.org/
http://www.aioe.org/
http://www.readfreenews.net/
http://www.individual.net/
http://www.octanews.com/ [Full-service provider, not so cheap]

--
Bert Hyman | St. Paul, MN | bert@iphouse.com

## 811. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 21:52:36 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <QOX3k.186355$fB7.45727@en-nntp-06.dc1.easynews.com>
Source record: 4999

Hi Dave,

Thanks for the information; it's quite helpful!

I was (am) committing the faux pas of feeding the mixer output directly into a narrow bandpass filter...

> For example, the popular
> Mini-Circuits SBL-1 mixer seems to have LO-to-IF isolations of
> anywhere from better than 65 dB (at HF) down to around 30 dB (at UHF).
> If you're trying to tune a weak signal (say, 80 or 90 dB weaker than
> the LO signal) then the residual LO feedthrough can cause the sort of
> swamping you're seeing.

So... say I'm using a 45MHz IF, trying to tune 414MHz using the SBL-1 and an LO of 414-45=369MHz (low-side injection) at the SBL-1's recommended +7dBm. Presumably I'll see a 7dBm - 30dB (LO-IF isolation) = -23dBm signal at the IF, but it should still be at 369MHz, right? How does the LO "bleed through" to the 45MHz IF... and what power level should I expect to see there?

---Joel

## 812. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 21:54:04 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0806111740380.7962@panix3.panix.com>
Source record: 4998

Before writing my comments, I read the comments of two others who
responded to your query.

On Wed, 11 Jun 2008, Joel Koltner wrote:

> I've been playing around with some homebrew superhet radios, and I'm finding
> that a significant amount of energy ends up at my 1st IF frequency that seems
> to be coming from the LO.

At this point I'd like to know what your problem is with "significant
amount of energy..." compared to whatever your ultimate goal is.

While I expect to see energy from LO+/-IF end up at
> IF, of course, I've checked the LO+/-IF spurs (the LO is coming from a
> PLL-based synthesizer), and in general it seems that a lot more energy ends up
> at the IF than what the spurs alone would suggest.

Again, what specifically are you "seeing" (measuring?) compared to what
you think you should be getting? Could your PLL synthesizer be dirtier
than you think?

I remember a talk I
> attended where the presenter mention that one of the biggest problems with
> building receivers was "the LO getting into the IF," so I'm thinking this is
> what he meant? Are there other less obvious paths for the LO getting into the
> IF than just the LO+/-IF spurs?

One way I would think about this is to ask if you looked at known circuits
that work and ask yourself what are you doing that is different from known
circuits that work. We also had some posts maybe 1-2 years ago where a guy
was working with chips and circuits and computer modelling (IIRC) and he
was unhappy that he was not getting (with real circuits) what his computer
modeling program told him he was supposed to get.

> The signal right at the IF eventually gets turned into DC and hence filtered
> out, so in theory it doesn't really matter that much, but in practice with
> very weak signals eventually the IF feedthru is stronger than the weak
> signals, so it limits how much amplification I can provide and hence limits
> the ultimate sensitivity of the receiver.

I do homebrew but with tubes and can tell many stories about what should
have been a straightforward project but electrical performance was
unacceptable. QST has had, in the past, articles on why ham-built copies
of ARRL circuits don't work and of course all the blame goes on the ham
and not ARRL but there is a lot of missing information in the handbooks,
too. I've learned a few tricks by the crash-and-burn, smoke tests with
smoke and no function, the "guess and pray" techniques, and the "dumb

looks"-after-the-smoke response. Very roughly, I'd say 50% of my projects work the way I hoped they would work, the rest go to the glue factory.

> Thanks,
> ---Joel Koltner
>
>
>

## 813. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 22:22:00 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <oeY3k.184451$6i4.72014@en-nntp-03.dc1.easynews.com>
Source record: 5000

"A" <arthures@panix.com> wrote in message
news:Pine.NEB.4.64.0806111740380.7962@panix3.panix.com...
> At this point I'd like to know what your problem is with "significant amount
> of energy..." compared to whatever your ultimate goal is.

I'll get something in the ballpark of an -90dBm spur at the IF when the noise floor is down around, say, -120dBm. Hence I have a harder time recovering signals at, say, -100dBm even though they still have a decent SNR (and my commercial receives have no difficulty at all hearing them). This is measured on an Agilent 8563 spectrum analyzer.

> Could your PLL synthesizer be dirtier than you think?

I've done some wideband sweeps of it, and there are some spurs that are only ~ -70dBc. It's obvious when you choose a channel that suffers from these higher-level spurs, though... it'll add 20dB or more to the IF spur. I ditched my homebrew PLL-based synthesizer for a good HP box borrowed for testing, though (its spurs are more like -90dBc worst case), and the problem is still there.

> One way I would think about this is to ask if you looked at known circuits
> that work and ask yourself what are you doing that is different from known
> circuits that work.

The usual problem is that very few circuits found on the Internet actually come with performance data -- unless you build them yourself, you really have no way to know if they're just as bad or worse than your own efforts!

> We also had some posts maybe 1-2 years ago where a guy was working with
> chips and circuits and computer modelling (IIRC) and he was unhappy that he
> was not getting (with real circuits) what his computer modeling program told
> him he was supposed to get.

It would almost be alarming if those circuits did work, in real life, within, say, 0.1dB of their simulated results rather than the more typical 1-5dB that's often still considered "good agreement!"

---Joel

# 814. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-11 23:55:54 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <155004a6-f76b-42a7-a642-43071d04d489@59g2000hsb.googlegroups.com>
Source record: 5001

On 11 Jun, 22:52, "Joel Koltner" <zapwireDASHgro...@yahoo.com> wrote:
> Hi Dave,
>
> Thanks for the information; it's quite helpful!
>
> I was (am) committing the faux pas of feeding the mixer output directly into a
> narrow bandpass filter...
>
> > For example, the popular
> > Mini-Circuits SBL-1 mixer seems to have LO-to-IF isolations of
> > anywhere from better than 65 dB (at HF) down to around 30 dB (at UHF).
> > If you're trying to tune a weak signal (say, 80 or 90 dB weaker than
> > the LO signal) then the residual LO feedthrough can cause the sort of
> > swamping you're seeing.
>
> So... say I'm using a 45MHz IF, trying to tune 414MHz using the SBL-1 and an
> LO of 414-45=369MHz (low-side injection) at the SBL-1's recommended +7dBm.
> Presumably I'll see a 7dBm - 30dB (LO-IF isolation) = -23dBm signal at the IF,
> but it should still be at 369MHz, right?  How does the LO "bleed through" to
> the 45MHz IF... and what power level should I expect to see there?
>
> ---Joel

DBMs should be terminated in 50 ohms over a wide bandwidth. MCL has
recommendations concerning this.

Leon

## 815. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 02:13:19 UTC
From: Robert Smits <bob@rsmits.ca>
Message-ID: <73e8302877856ce455b0aa763b35bb9e@grapevine.islandnet.com>
Source record: 5002

andrew cuomo wrote:

> No more usenet news for RoadRunner users as of June 23. You have to
> sign up with a pay service.
>
> For questions call Time Warner central: 203-328-0600.
>
> Press 2 to get the "Office of the President". Stay on the line to
> talk to the "Customer Care Advocate."
>
> A nice person will take your message. They even say they will look
> into it and call back.

I sure hope some Time-Warner subscribers institute a class action lawsuit against them for taking away a big part of the internet for their customers.

## 816. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 02:18:48 UTC
From: james <george@washington.edu>
Message-ID: <sl1154du7jqb1g99kin78cssmsods2dqjg@4ax.com>
Source record: 5003
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
On Wed, 11 Jun 2008 13:36:55 -0700 (PDT), Telstar Electronics
<briangriffey@sbcglobal.net> wrote:

|On Jun 11, 8:44ï¿½am, james <geo...@washington.edu> wrote:
|> On Mon, 9 Jun 2008 06:25:33 -0700 (PDT), Telstar Electronics
|>
|> <briangrif...@sbcglobal.net> wrote:
|>
|> |On Jun 6, 4:17ï¿½pm, james <geo...@washington.edu> wrote:
|> |> On Thu, 5 Jun 2008 16:25:44 -0400, "Tio Pedro"
|> |>|> <radioconnect...@cox.net> wrote:
|>
|> |>
|> |> ||"Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
|> |>
|> |> |news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
|> |> |> VoiceMax is really gaining momentum!
|> |> |> Radio operators all over the world are enjoying the Voicemax
|> |> |> advantage.
|> |> |> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
|> |> |> clear.
|> |> |> What a concept!
|> |> |>
|> |> |> See what VoiceMax can do for you at
|> |> |>http://www.telstar-electronics.com/voicemax.htm
|> |> |
|> |> |What is the dB advantage of this vs. RF clipping for SSB?
|> |> |
|> |> |
|> |> |----------------------
|> |>
|> |> RF Clipping is superior to audio compression in SSB transmission. RF
|> |> clipping will provide about 6dB improvement over audio compression
|> |> alone.
|> |>
|> |> james
|> |
|> |James is correct... that the RF clipping technique is somewhat more
|> |effective. What he fails to mention is that it's more complex... and
|> |not easily installed into an existing radio. RF clipping also
|> |exihibits substantially more distortion. The VoiceMax installs
|> |easily... and provides tangible results.
|> |----------------
```

|>
|> Actually as easy to design an RF Clipper as an audio compressor. True
|> it is a bit more difficult to install. Audio clippers can be external
|> to the transmitter and simpler to install and operate. A RF Clipper
|> will install as easily as your internal audio compressor. ï¿½
|>
|> Personally I would take RF clipping over Audio compression any day
|> with SSB transmissions. If the post filters are good in enough RF
|> clipping, there is not significant difference in distortion.
|>
|> james
|
|But I was under the impression that RF clippers only work on SSB?...
|and the installation involves tearing into the IF section?
|--------------

Correct. An RF clipper an be inserted after the SSB filters or before.
There are versions that do the clipping after the balance modualtor
and before filters. Sherwood did a RF clipper for the Drake TR4 that
was after the SSB filters and had crystal filters to restore the
original bandwidth.

Generally RF clipping is a bit more expensive than audio compression.
Then you get what you pay for.

james

# 817. ** FLEA at MIT ** Sunday June 15th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 02:27:40 UTC
From: w1gsl@mit.edu
Message-ID: <4850899c$0$302$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 5004
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.info

This coming Sunday....
the next .... FLEA at MIT

**********
**********

Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

*** !!!! In our Traditional GARAGE and the adjacent lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

<FF>
********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday June 15th 2008
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held on Albany between Mass Ave and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

SEASON PASS + Advance Seller Discount

A sellers discount season pass is available which
offers a 30% discount. By prepaying you get a
discount and earlier admission. See the registration form.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776 (M-F 9-5)

********** $1 buyers discount with hard copy of this notice ************

<FF>

Mail the coupon below by the 5th to be a Prepaid Vendor.

FLEA at MIT 2008 Rates

SELLERS

To use your prepaid spaces the named vendor MUST be present.
Rates include one admission per space.

Season Pass Sellers admission to all seven meets this year
$99 First Space
$70 Each Additional space
Must be received by April 20th.

Advance $17 First space
$12 Additional Spaces
Must be received by the 10th of the month.

Gate Admission $20 First Space
$15 Additional Spaces
Admission is after the prepaid vendors.

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

cut and return
**********
FLEA at MIT 2008 Advance Space Application 4/08

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional
____Season Pass @ $99 ____ Additional Season Spaces @ $70 ___EBB @$70

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

**********
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
**********

## 818. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 07:18:02 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.06.12.07.18.02.942266@localhost.localdomain>
Source record: 5005

On Wed, 11 Jun 2008 20:46:48 +0000, Bert Hyman wrote:

> control@control.com (andrew cuomo) wrote in
> news:ord054hr1qdqk2bn1728o7trdk6cq85vqa@4ax.com:
>
>> No more usenet news for RoadRunner users as of June 23. You have to
>> sign up with a pay service.
>
> There are free USENET providers, and some very cheap ones.
>
> http://www.motzarella.org/
> http://www.aioe.org/
> http://www.readfreenews.net/
> http://www.individual.net/
> http://www.octanews.com/ [Full-service provider, not so cheap]

I'm on Octanews and buy blocks. They rock!

My stupid ISP caps Usenet at slower-than-dial-up rates >.<

Cheers!

## 819. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 07:54:11 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <MC44k.184793$6i4.63015@en-nntp-03.dc1.easynews.com>
Source record: 5006

"Robert Smits" <bob@rsmits.ca> wrote in message
news:73e8302877856ce455b0aa763b35bb9e@grapevine.islandnet.com...
> I sure hope some Time-Warner subscribers institute a class action lawsuit
> against them for taking away a big part of the internet for their
> customers.

It's very likely that customers will find that nowhere in their subscription contract is access to a Usenet server actually promised... with most ISPs it's been a "free perk" for a long time (years) now.

There was a time when some ISPs provided shell accounts as well -- that's been gone for years as well... although web hosting companies often still provide it.

## 820. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 08:03:36 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <zmhuVNIYhNUIFwPF@g3ohx.demon.co.uk>
Source record: 5007
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
In message <sl1154du7jqb1g99kin78cssmsods2dqjg@4ax.com>, james
<george@washington.edu> writes
>On Wed, 11 Jun 2008 13:36:55 -0700 (PDT), Telstar Electronics
><briangriffey@sbcglobal.net> wrote:
>
>|On Jun 11, 8:44ï¿½am, james <geo...@washington.edu> wrote:
>|> On Mon, 9 Jun 2008 06:25:33 -0700 (PDT), Telstar Electronics
>|>
>|> <briangrif...@sbcglobal.net> wrote:
>|>
>|> |On Jun 6, 4:17ï¿½pm, james <geo...@washington.edu> wrote:
>|> |> On Thu, 5 Jun 2008 16:25:44 -0400, "Tio Pedro"
>|> |>|> <radioconnect...@cox.net> wrote:
>|>
>|> |>
>|> |> ||"Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
>|> |>
>|> |> |news:c58546f7-aa2a-40eb-91fe-525a3acc53c9@34g2000hsh.googlegroups.com...
>|> |> |> VoiceMax is really gaining momentum!
>|> |> |> Radio operators all over the world are enjoying the Voicemax
>|> |> |> advantage.
>|> |> |> Since VoiceMax doesn't use audio "clipping"... your audio is loud AND
>|> |> |> clear.
>|> |> |> What a concept!
>|> |> |>
>|> |> |> See what VoiceMax can do for you at
>|> |> |>http://www.telstar-electronics.com/voicemax.htm
>|> |> |
>|> |> |What is the dB advantage of this vs. RF clipping for SSB?
>|> |> |
>|> |> |
>|> |> |----------------------
>|> |>
>|> |> RF Clipping is superior to audio compression in SSB transmission. RF
>|> |> clipping will provide about 6dB improvement over audio compression
>|> |> alone.
>|> |>
>|> |> james
>|> |
>|> |James is correct... that the RF clipping technique is somewhat more
>|> |effective. What he fails to mention is that it's more complex... and
>|> |not easily installed into an existing radio. RF clipping also
>|> |exihibits substantially more distortion. The VoiceMax installs
```

>|> |easily... and provides tangible results.
>|> |----------------
>|>
>|> Actually as easy to design an RF Clipper as an audio compressor. True
>|> it is a bit more difficult to install. Audio clippers can be external
>|> to the transmitter and simpler to install and operate. A RF Clipper
>|> will install as easily as your internal audio compressor. ï¿½
>|>
>|> Personally I would take RF clipping over Audio compression any day
>|> with SSB transmissions. If the post filters are good in enough RF
>|> clipping, there is not significant difference in distortion.
>|>
>|> james
>|
>|But I was under the impression that RF clippers only work on SSB?...
>|and the installation involves tearing into the IF section?
>|--------------
>
>Correct. An RF clipper an be inserted after the SSB filters or before.
>There are versions that do the clipping after the balance modualtor
>and before filters. Sherwood did a RF clipper for the Drake TR4 that
>was after the SSB filters and had crystal filters to restore the
>original bandwidth.
>
>Generally RF clipping is a bit more expensive than audio compression.
>Then you get what you pay for.
>
>
>james

I thought that there were some stand-alone RF clippers. Surely there is
no reason why they cannot be external units, inserted in-line between
the mic and the mic socket (ie audio in - audio out)?

Obviously they have to contain 'all the works' (oscillator, balanced
modulator, compressor, clipper, filters, balanced demodulator etc), but
at least they are self-contained and universal.

Regarding filtering, the main advantage of RF clippers is that they
eliminate the effects of second-order distortion, and only have the
distortion produced by in-band third order intermodulation. For
cheapness and simplicity, if you leave out the SSB filtering (ie do
everything at DSB), you will have at least twice the number of in-band
IM products. But how much worse is this than having SSB filtering?
--
Ian

## 821. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 09:45:03 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <etr154h8ohbrsqp3h7oukrkk81h0uhk9ml@4ax.com>
Source record: 5008
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Thu, 12 Jun 2008 09:03:36 +0100, Ian Jackson
<ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:

>I thought that there were some stand-alone RF clippers. Surely there is
>no reason why they cannot be external units, inserted in-line between
>the mic and the mic socket (ie audio in - audio out)?
>
At least Datong made a stand-alone unit. There was an article about
RF-clipping and the Datong unit in Wireless World a few decades ago.

Paul OH3LWR

## 822. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 11:24:35 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <c2363b23-32a8-4578-b3f2-e9ee71eeb050@d1g2000hsg.googlegroups.com>
Source record: 5009
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> I thought that there were some stand-alone RF clippers. Surely there is
> no reason why they cannot be external units, inserted in-line between
> the mic and the mic socket (ie audio in - audio out)?

Huh? How can you do RF clipping outside the unit? Not a chance...
Any unit that's inserted in the mic jack is no RF clipper.
www.telstar-electronics.com

## 823. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 12:28:38 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <CY6CqrA2ZRUIFwKg@g3ohx.demon.co.uk>
Source record: 5010
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In message
<c2363b23-32a8-4578-b3f2-e9ee71eeb050@d1g2000hsg.googlegroups.com>,
Telstar Electronics <briangriffey@sbcglobal.net> writes
>> I thought that there were some stand-alone RF clippers. Surely there is
>> no reason why they cannot be external units, inserted in-line between
>> the mic and the mic socket (ie audio in - audio out)?
>
>Huh? How can you do RF clipping outside the unit? Not a chance...
>Any unit that's inserted in the mic jack is no RF clipper.
>www.telstar-electronics.com

As I said. "Obviously they have to contain 'all the works' (oscillator,
balanced modulator, compressor, clipper, filters, balanced demodulator
etc)."

And, as Paul said, "At least Datong made a stand-alone unit. There was
an article about RF-clipping and the Datong unit in Wireless World a few
decades ago."

But maybe Datong didn't know what they were doing.
--
Ian

## 824. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 13:30:35 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <%x94k.205330$yE1.184476@attbi_s21>
Source record: 5011
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

>>Huh? How can you do RF clipping outside the unit? Not a chance...
>>Any unit that's inserted in the mic jack is no RF clipper.
>>www.telstar-electronics.com
>
> As I said. "Obviously they have to contain 'all the works' (oscillator,
> balanced modulator, compressor, clipper, filters, balanced demodulator
> etc)."
>
> And, as Paul said, "At least Datong made a stand-alone unit. There was an
> article about RF-clipping and the Datong unit in Wireless World a few
> decades ago."
>
> But maybe Datong didn't know what they were doing.
> --
> Ian

They had a lot of company, and the residents here have a very short memory. Datong was second. Comdel made an RF clipper in the late 60's and early 70's. Mike input and amplifier, mixed up to 455 KHz, sideband generated, clipped the hell out of it, filtered it with a second filter, mixed back down to audio with the same LO for injection to your mike input jack. Every serious contester and DXer had one. Cost more than the receiver.

W4ZCB

## 825. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 13:45:18 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <IYMLKWNuhSUIFw$a@g3ohx.demon.co.uk>
Source record: 5013
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In message <%x94k.205330$yE1.184476@attbi_s21>, Harold E. Johnson
<W4ZCB@mchsi.com> writes
>
>>>Huh? How can you do RF clipping outside the unit? Not a chance...
>>>Any unit that's inserted in the mic jack is no RF clipper.
>>>www.telstar-electronics.com
>>
>> As I said. "Obviously they have to contain 'all the works' (oscillator,
>> balanced modulator, compressor, clipper, filters, balanced demodulator
>> etc)."
>>
>> And, as Paul said, "At least Datong made a stand-alone unit. There was an
>> article about RF-clipping and the Datong unit in Wireless World a few
>> decades ago."
>>
>> But maybe Datong didn't know what they were doing.
>> --
>> Ian
>
>They had a lot of company, and the residents here have a very short memory.
>Datong was second. Comdel made an RF clipper in the late 60's and early
>70's. Mike input and amplifier, mixed up to 455 KHz, sideband generated,
>clipped the hell out of it, filtered it with a second filter, mixed back
>down to audio with the same LO for injection to your mike input jack. Every
>serious contester and DXer had one. Cost more than the receiver.
>
>W4ZCB
>
Yes, a quick Google on "RF clipper"+Datong brings up lots of info -
about Datong and lots of others. This is one of the first:
http://www.qsl.net/m0ezp/radio-datong.html
--
Ian

# 826. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 13:46:47 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <00ed3557-3b12-4fad-b417-d60bf8f0615b@b1g2000hsg.googlegroups.com>
Source record: 5012

On Jun 11, 5:52 pm, "Joel Koltner" <zapwireDASHgro...@yahoo.com>
wrote:
> Hi Dave,
>
> Thanks for the information; it's quite helpful!
>
> I was (am) committing the faux pas of feeding the mixer output directly into a
> narrow bandpass filter...
>
> > For example, the popular
> > Mini-Circuits SBL-1 mixer seems to have LO-to-IF isolations of
> > anywhere from better than 65 dB (at HF) down to around 30 dB (at UHF).
> > If you're trying to tune a weak signal (say, 80 or 90 dB weaker than
> > the LO signal) then the residual LO feedthrough can cause the sort of
> > swamping you're seeing.
>
> So... say I'm using a 45MHz IF, trying to tune 414MHz using the SBL-1 and an
> LO of 414-45=369MHz (low-side injection) at the SBL-1's recommended +7dBm.
> Presumably I'll see a 7dBm - 30dB (LO-IF isolation) = -23dBm signal at the IF,
> but it should still be at 369MHz, right?  How does the LO "bleed through" to
> the 45MHz IF... and what power level should I expect to see there?

Ah - here you hit something on the head. I didn't know you were asking
about UHF, but now I can contribute!

SBL-1 balance isolation gets substantially worse as you move from HF
to VHF to UHF. Looking at the spec sheet, as you move from 3MHz (where
I use the SBL-1) to 369 MHz (where you use the SBL-1) the isolation
gets 34 dB worse.

*AND* the typical and guaranteed numbers are only if all the ports are
terminated nicely.

So while my gut feeling was originally "LO-IF isolation, that's never
been a problem for me at 3.5 or 7 MHz with the SBL-1" now I look at
the spec sheet and think "wow, isolation is a much bigger problem at
UHF than anything I've ever dealt with in the SBL-1 at HF"!

If you can arrange the IF stuff at the output of the mixer such that
you have a good flat termination match and such that you hit an IF
filter that will get rid of the LO before any substantial gain, I
think you'll come out way ahead of just switching to a different
variety of mixer.

Tim N3QE

# 827. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 14:12:06 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrng52blm.2upk.bit-bucket@shell.config.com>
Source record: 5014

On Thu, 12 Jun 2008 00:18:02 -0700, geek wrote:
> On Wed, 11 Jun 2008 20:46:48 +0000, Bert Hyman wrote:
>> control@control.com (andrew cuomo) wrote
>>
>>> No more usenet news for RoadRunner users as of June 23.
>>> You have to sign up with a pay service.
>>
>> There are free USENET providers, and some very cheap ones.
>>
>> http://www.motzarella.org/
>> http://www.aioe.org/
>> http://www.readfreenews.net/
>> http://www.individual.net/
>> http://www.octanews.com/ [Full-service provider, not so cheap]
>
> I'm on Octanews and buy blocks. They rock!

Highly recommedned: http://individual.net/

I've been with them for nearly ten years now. That's two lifetimes in
internet years. It's just 10 Euros per year and they have a pretty good
track record on killing most spam. No binaries, tho'

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

## 828. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 15:35:20 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <28149a87-09f2-4778-aece-7533b162308f@34g2000hsh.googlegroups.com>
Source record: 5015
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> As I said. "Obviously they have to contain 'all the works' (oscillator,
> balanced modulator, compressor, clipper, filters, balanced demodulator
> etc)."

That sounds very complex and expensive all right.
Another problem I see is that they only work on SSB.
My customers insist on something small that fits inside the radio and
processes in all modes. The VoiceMax does that with less than 1% THD.
Can't build them fast enough to keep them in stock...

## 829. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 16:57:43 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <WeKdndMnj8GgyMzVnZ2dnUVZ_s3inZ2d@posted.cpinternet>
Source record: 5016

Bert Hyman wrote:

> control@control.com (andrew cuomo) wrote in
> news:ord054hr1qdqk2bn1728o7trdk6cq85vqa@4ax.com:
>
>
>>No more usenet news for RoadRunner users as of June 23. You have to
>>sign up with a pay service.
>
>
> There are free USENET providers, and some very cheap ones.
>

<snip>
> http://www.aioe.org/

Please don't recommend this one; it is plagued with forgers
and spammers and has chosen to block groups like sci.electronics.repair
instead of policing its users.

Michael

# 830. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 18:15:35 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <HPmzvkAHfWUIFw7X@g3ohx.demon.co.uk>
Source record: 5017
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In message
<28149a87-09f2-4778-aece-7533b162308f@34g2000hsh.googlegroups.com>,
Telstar Electronics <briangriffey@sbcglobal.net> writes
>
>> As I said. "Obviously they have to contain 'all the works' (oscillator,
>> balanced modulator, compressor, clipper, filters, balanced demodulator
>> etc)."
>
>That sounds very complex and expensive all right.
>Another problem I see is that they only work on SSB.
>My customers insist on something small that fits inside the radio and
>processes in all modes. The VoiceMax does that with less than 1% THD.
>Can't build them fast enough to keep them in stock...

Why do you think that they only work on SSB? Stand-alone RF clippers
like the Datong are independent of transmit mode. They are audio in -
audio out (with a bit of RF magic in between). They should work even on
an audio PA system.
--
Ian

## 831. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 19:22:36 UTC
From: mzenier@eskimo.com
Message-ID: <g2u4ni01map@enews2.newsguy.com>
Source record: 5022

In article <73e8302877856ce455b0aa763b35bb9e@grapevine.islandnet.com>,
Robert Smits <bob@rsmits.ca> wrote:
>andrew cuomo wrote:
>
>> No more usenet news for RoadRunner users as of June 23. You have to
>> sign up with a pay service.
>>
>> For questions call Time Warner central: 203-328-0600.
>>
>> Press 2 to get the "Office of the President". Stay on the line to
>> talk to the "Customer Care Advocate."
>>
>> A nice person will take your message. They even say they will look
>> into it and call back.
>
>
>I sure hope some Time-Warner subscribers institute a class action lawsuit
>against them for taking away a big part of the internet for their
>customers.

According to an article in yesterday's newspaper, (Seattle Times, sourced
from the Christian Science Monitor and the AP), they're protecting their
customers from child pornography.

Which means that they were too incompetent to run a text only server
with a binaries filter.

Mark Zenier mzenier@eskimo.com
Googleproofaddress(account:mzenier provider:eskimo domain:com)

## 832. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-12 20:00:22 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <284b2da4-e248-436d-b260-de3891e6005c@r66g2000hsg.googlegroups.com>
Source record: 5018
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> Why do you think that they only work on SSB? Stand-alone RF clippers
> like the Datong are independent of transmit mode. They are audio in -
> audio out (with a bit of RF magic in between). They should work even on
> an audio PA system.

OK, thanks for your input.

## 833. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-13 03:43:05 UTC
From: Steve <moparholic@hotmail.com>
Message-ID: <20080612234308.760$aU@newsreader.com>
Source record: 5019
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:
> In message
> <28149a87-09f2-4778-aece-7533b162308f@34g2000hsh.googlegroups.com>,
> Telstar Electronics <briangriffey@sbcglobal.net> writes
> >
> >> As I said. "Obviously they have to contain 'all the works'
> >> (oscillator, balanced modulator, compressor, clipper, filters,
> >> balanced demodulator etc)."
> >
> >That sounds very complex and expensive all right.
> >Another problem I see is that they only work on SSB.
> >My customers insist on something small that fits inside the radio and
> >processes in all modes. The VoiceMax does that with less than 1% THD.
> >Can't build them fast enough to keep them in stock...
>
> Why do you think that they only work on SSB? Stand-alone RF clippers
> like the Datong are independent of transmit mode. They are audio in -
> audio out (with a bit of RF magic in between). They should work even on
> an audio PA system.
>
Berhinger has consumed that nitch now, especially with ESSB.

--
http://NewsReader.Com/
```

## 834. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-13 12:44:37 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <51fe3db0-9316-462e-88b7-5a32215a1905@z66g2000hsc.googlegroups.com>
Source record: 5020
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> Berhinger has consumed that nitch now, especially with ESSB.

LOL... a unit like that (http://www.nu9n.com/deq2496.html) would cost
you at least $300. That's more than your whole station is worth!
Come on... you know how frugal hams & cbers are. Get real.
www.telstar-electronics.com

## 835. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-13 13:03:28 UTC
From: Steve <moparholic@hotmail.com>
Message-ID: <20080613090328.900$sv@newsreader.com>
Source record: 5021
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Telstar Electronics <briangriffey@sbcglobal.net> wrote:
> > Berhinger has consumed that nitch now, especially with ESSB.
>
> LOL... a unit like that (http://www.nu9n.com/deq2496.html) would cost
> you at least $300. That's more than your whole station is worth!
>
Dream on, Brian. You can't touch my ts870 for less than $1000, more like
$1200 if you can find one.
>
> Come on... you know how frugal hams & cbers are. Get real.
> www.telstar-electronics.com
>
I'm hearing more and more voodoo audio these days so there are plenty of
stations running rack gear, try more listening and less spamming your junk.

--
http://NewsReader.Com/

## 836. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-13 18:00:42 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <e8b50bfb-ce24-450c-aa8f-30cce054d9f4@27g2000hsf.googlegroups.com>
Source record: 5023
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> Dream on, Brian. You can't touch my ts870 for less than $1000, more like
> $1200 if you can find one.

You mean that old beat up one you got at the garage sale?
I didn't know you ever got that thing working since it was under water
and so rusty inside.
Kudos on your technician skills... fixing up that old dog.

# 837. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-13 23:05:34 UTC
From: dplatt@radagast.org
Message-ID: <u2bbi5-8du.ln1@radagast.org>
Source record: 5024

In article <QOX3k.186355$fB7.45727@en-nntp-06.dc1.easynews.com>,
Joel Koltner <zapwireDASHgroups@yahoo.com> wrote:

>Hi Dave,
>
>Thanks for the information; it's quite helpful!
>
>I was (am) committing the faux pas of feeding the mixer output directly into a
>narrow bandpass filter...
>
>> For example, the popular
>> Mini-Circuits SBL-1 mixer seems to have LO-to-IF isolations of
>> anywhere from better than 65 dB (at HF) down to around 30 dB (at UHF).
>> If you're trying to tune a weak signal (say, 80 or 90 dB weaker than
>> the LO signal) then the residual LO feedthrough can cause the sort of
>> swamping you're seeing.
>
>So... say I'm using a 45MHz IF, trying to tune 414MHz using the SBL-1 and an
>LO of 414-45=369MHz (low-side injection) at the SBL-1's recommended +7dBm.
>Presumably I'll see a 7dBm - 30dB (LO-IF isolation) = -23dBm signal at the IF,
>but it should still be at 369MHz, right? How does the LO "bleed through" to
>the 45MHz IF... and what power level should I expect to see there?

I'd say that you could be seeing the 369 MHz LO signal in your IF
pathway through a number of mechanisms.

First: some of it may be getting past your bandpass filter. If
you're using a crystal filter, you may find (if you look) that the
filter's stopband attenuation is neither wonderful nor flat at some
frequencies. Crystals often have secondary resonances at (or near)
the harmonics of their fundamental frequency - that's how overtone
filters work - and your LO of 369 MHz isn't all that far from the 8th
harmonic of your IF frequency.

You'd probably need to sweep your filter's response (wideband
oscillator plus an RF detector or a spectrum analyzer) to determine if
this is occurring.

If this is the problem, you might remedy it by adding a one- or
two-stage passive lowpass filter (maybe LC, maybe just RC) somewhere
after the mixer and before the final detector. This would attenuate
out the residual LO signal that the bandpass filter doesn't. Maybe
run the mixer output into that grounded-base/source 50-ohm buffer amp
I suggested, gain a few dB, and then run the signal into a slightly
lossy low-pass filter whose output presents your bandpass filter with the
termination impedance it expects?

Second: you may be getting parasitic transmission of the LO signal *around* the bandpass filter - either capacitive or inductive. If your bandpass filter is a tuned LC type rather than a crystal filter, there might be coupling between the inductors.

Third: you might be getting some LO pickup by the gain stages in the IF path, direct from the local oscillator - wire-to-wire coupling or something like that.

Fourth: you might be getting LO wandering around on the power supply lines or in the ground paths/planes - insufficient power-supply decoupling, shared power-supply wires, shared ground paths, and so forth.

I get the impression that careful attention to layout, shielding, and decoupling are very important for higher-performance receivers. Some builders seem to prefer to place the LO, mixer, and filter in separate shielded sub-compartments (soldered together from double-sided PC board material if nothing else), to carry the signals between these compartments on shielded coax, and to use feedthrough caps and ferrite beads on the power wiring. This helps minimize the various forms of parasitic coupling between stages.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

## 838. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-14 07:46:38 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.06.14.07.46.36.403992@localhost.localdomain>
Source record: 5025

On Thu, 12 Jun 2008 19:22:36 +0000, Mark Zenier wrote:

> In article <73e8302877856ce455b0aa763b35bb9e@grapevine.islandnet.com>,
> Robert Smits <bob@rsmits.ca> wrote:
>>andrew cuomo wrote:
>>
>>> No more usenet news for RoadRunner users as of June 23. You have to
>>> sign up with a pay service.
>>>
>>> For questions call Time Warner central: 203-328-0600.
>>>
>>> Press 2 to get the "Office of the President". Stay on the line to
>>> talk to the "Customer Care Advocate."
>>>
>>> A nice person will take your message. They even say they will look
>>> into it and call back.
>>
>>
>>I sure hope some Time-Warner subscribers institute a class action lawsuit
>>against them for taking away a big part of the internet for their
>>customers.
>
> According to an article in yesterday's newspaper, (Seattle Times, sourced
> from the Christian Science Monitor and the AP), they're protecting their
> customers from child pornography.
>
> Which means that they were too incompetent to run a text only server
> with a binaries filter.
>
> Mark Zenier mzenier@eskimo.com
> Googleproofaddress(account:mzenier provider:eskimo domain:com)

They are too incompetent to realize that they tend to be the SOURCE of the
USA child pornography, LOL!

## 839. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-14 19:02:37 UTC
From: Steve <moparholic@hotmail.com>
Message-ID: <20080614150239.168$CE@newsreader.com>
Source record: 5026
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Telstar Electronics <briangriffey@sbcglobal.net> wrote:
> > Dream on, Brian. You can't touch my ts870 for less than $1000, more
> > like $1200 if you can find one.
>
> You mean that old beat up one you got at the garage sale?
> I didn't know you ever got that thing working since it was under water
> and so rusty inside.
> Kudos on your technician skills... fixing up that old dog.
>
What the hell are you smoking, Brian? I traded an ft-920 for this 870.

--
http://NewsReader.Com/

# 840. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-14 21:45:54 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0806141738020.5719@panix3.panix.com>
Source record: 5027

See at end...

On Wed, 11 Jun 2008, Joel Koltner wrote:

> "A" <arthures@panix.com> wrote in message
> news:Pine.NEB.4.64.0806111740380.7962@panix3.panix.com...
>> At this point I'd like to know what your problem is with "significant amount
>> of energy..." compared to whatever your ultimate goal is.
>
> I'll get something in the ballpark of an -90dBm spur at the IF when the noise
> floor is down around, say, -120dBm. Hence I have a harder time recovering
> signals at, say, -100dBm even though they still have a decent SNR (and my
> commercial receives have no difficulty at all hearing them). This is measured
> on an Agilent 8563 spectrum analyzer.
>
>> Could your PLL synthesizer be dirtier than you think?
>
> I've done some wideband sweeps of it, and there are some spurs that are only
> ~ -70dBc. It's obvious when you choose a channel that suffers from these
> higher-level spurs, though... it'll add 20dB or more to the IF spur. I
> ditched my homebrew PLL-based synthesizer for a good HP box borrowed for
> testing, though (its spurs are more like -90dBc worst case), and the problem
> is still there.
>
>> One way I would think about this is to ask if you looked at known circuits
>> that work and ask yourself what are you doing that is different from known
>> circuits that work.
>
> The usual problem is that very few circuits found on the Internet actually
> come with performance data -- unless you build them yourself, you really have
> no way to know if they're just as bad or worse than your own efforts!
>
>> We also had some posts maybe 1-2 years ago where a guy was working with
>> chips and circuits and computer modelling (IIRC) and he was unhappy that he
>> was not getting (with real circuits) what his computer modeling program told
>> him he was supposed to get.
>
> It would almost be alarming if those circuits did work, in real life, within,
> say, 0.1dB of their simulated results rather than the more typical 1-5dB
> that's often still considered "good agreement!"

I don't recall what the guy was upset about. I don't think (IIRC) that we
had any comments regarding what, quantitatively, he was looking for vs.
what he was getting, quantitatively, but he was definitely upset.

I don't have anything like the fancy gear you have and my criteria are more or less "if you can hear it and its OK with you, then its fine" (for receivers anyway). On transmit, I have enough tuned circuits in various places that my spurious signals should be good enough for the FCC. And, I'm using quite clean free running oscillators at VFO, LO points. Its really wonderful to be able to see sine waves on any one of my three Tektronixs scopes, thought. I'll add that if I don't have at least some minimum number of tuned circuits, that "sine wave" develops very visible "distortions." Maybe someday I'll be interested in quantitating them.

In the meantime, good luck on your endeavors. And, thanks for the fills on the technical stuff. Can't help you any more than that.

> ---Joel
>
>
>

## 841. teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-15 01:44:04 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <atKdnUYS1-t57snVnZ2dnUVZ_r7inZ2d@comcast.com>
Source record: 5028

Looking for #20 teflon wire and of course need only a short length.
Anyone out there have a favorite wire distributor who takes pity on us
homebrew types and sells by the foot?? Thanks all.

gary

## 842. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-15 02:32:49 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <IY6dnWxu4PzP4snVnZ2dnUVZ_s7inZ2d@comcast.com>
Source record: 5029

"Gary" <gbelcas@comcast.net> wrote in message
news:atKdnUYS1-t57snVnZ2dnUVZ_r7inZ2d@comcast.com...
>
>
> Looking for #20 teflon wire and of course need only a short length. Anyone out
> there have a favorite wire distributor who takes pity on us
> homebrew types and sells by the foot?? Thanks all.
>
> gary

If you could get by with a smaller wire, like AWG 24 or so, you can find loads of that stuff in Cat-5 cable. Just strip off the outer jacket and untwist the pairs. Pretty cheap too. Don't know the voltage rating of the individual wires, though.
Alltronics (http://www.alltronics.com) sells by the foot, although they have a 25 ft minimum. Seems the only color they have in stock is red.
Surplus Sales (http://www.surplussales.com/wire-cable/Wire4.html) has it in stock. again, 25 ft minimum.
Action Electronics seems to have the best color selection (http://www.action-electronics.com/ntehuwt.htm#20)
Amp Builders Parts (http://ampbuildersparts.com/store/index.php?main_page=index&cPath=34) also... 100 ft spools, but better price.

Hope you can find what you need from one of those links.

Cheers!!!!

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

Experience: What you get when you don't get what you want

## 843. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-15 02:56:22 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <485484D6.5060700@bloomer.net>
Source record: 5030

DaveM wrote:
> "Gary" <gbelcas@comcast.net> wrote in message
> news:atKdnUYS1-t57snVnZ2dnUVZ_r7inZ2d@comcast.com...
>
>>
>>Looking for #20 teflon wire and of course need only a short length. Anyone out
>>there have a favorite wire distributor who takes pity on us
>>homebrew types and sells by the foot?? Thanks all.
>>
>>gary
>
>
>
> If you could get by with a smaller wire, like AWG 24 or so, you can find loads
> of that stuff in Cat-5 cable. Just strip off the outer jacket and untwist the
> pairs. Pretty cheap too. Don't know the voltage rating of the individual wires,
> though.
> Alltronics (http://www.alltronics.com) sells by the foot, although they have a
> 25 ft minimum. Seems the only color they have in stock is red.
> Surplus Sales (http://www.surplussales.com/wire-cable/Wire4.html) has it in
> stock. again, 25 ft minimum.
> Action Electronics seems to have the best color selection
> (http://www.action-electronics.com/ntehuwt.htm#20)
> Amp Builders Parts
> (http://ampbuildersparts.com/store/index.php?main_page=index&cPath=34) also...
> 100 ft spools, but better price.
>
> Hope you can find what you need from one of those links.
>
> Cheers!!!!
>
I have plenty of #22 stranded teflon wire if this will work for you. I
have black and white. How much do you need? It's yours for the asking
if you only need something like 20 or 25 feet or so. Send me a postal
address or callsign I can look up in qrz.com and I send you some if you
can use it. acepilot at bloomer dot net.

Scott
N0EDV

## 844. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-15 17:15:31 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <67c5k.1163$F97.592@newsfe18.lga>
Source record: 5031

"Gary" <gbelcas@comcast.net> wrote in message
news:atKdnUYS1-t57snVnZ2dnUVZ_r7inZ2d@comcast.com...
>
>
> Looking for #20 teflon wire and of course need only a short length. Anyone
> out there have a favorite wire distributor who takes pity on us
> homebrew types and sells by the foot?? Thanks all.
>
> gary

What color do you need? I have some short lengths in stock
of various colors, including some striped stuff. Give me an
address and I'll send you some for the price of the postage.
I'm not sure it is exactly 20 gauge, but it is stranded and darn
close to that size.

Let me know. My email is radioconnection (at) juno (dot) com.
I'll get it out to you if you wish. Send back the postage if you're
happy afterwards.

Pete k1zjh

## 845. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 12:38:12 UTC
From: NoMoreSpam <Disgustedham@qrparci.org>
Message-ID: <48565EB4.4010800@qrparci.org>
Source record: 5032
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Telstar Electronics wrote:
>> Laura Halliday VE7LDH "Non sequitur. Your ACKS are
>> Grid: CN89mg uncoordinated."
>> ICBM: 49 16.05 N 122 56.92 W - Nomad the Network Engineer
>
> Good to hear from you Laura. You can see a photo of the Voicemax
> speech processor in a radio... right before the radio was buttoned up
> at http://tinyurl.com/2t2usu

Appropriately, a CB radio, illegally modified. Only a CBer would fall for this
"Speech Processor."

## 846. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 12:47:07 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <931c7395-18c2-4037-a93e-a3225845e6ee@34g2000hsh.googlegroups.com>
Source record: 5033
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> Appropriately, a CB radio, illegally modified. Only a CBer would fall for this
> "Speech Processor."

Laura,
Evidently there are many radio operators worldwide that don't share
your views...
Thanks for your comment anyway...

# 847. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 12:51:43 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <486d0c50-9a40-497c-9064-b1f06e5dfa8d@e39g2000hsf.googlegroups.com>
Source record: 5034

On Jun 15, 3:15 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> "Gary" <gbel...@comcast.net> wrote in message
>
> news:atKdnUYS1-t57snVnZ2dnUVZ_r7inZ2d@comcast.com...
>
>
>
> > Looking for #20 teflon wire and of course need only a short length. Anyone
> > out there have a favorite wire distributor who takes pity on us
> > homebrew types and sells by the foot??  Thanks all.
>
> > gary
>
> What color do you need?  I have some short lengths in stock
>  of various colors, including some striped stuff.  Give me an
> address and I'll send you some for the price of the postage.
> I'm not sure it is exactly 20 gauge, but it is stranded and darn
> close to that size.
>
> Let me know. My email is radioconnection (at) juno (dot) com.
> I'll get it out to you if you wish. Send back the postage if you're
> happy afterwards.
>
> Pete k1zjh

Question: Why teflon. Heat rating? Or high voltage insulation rating?
Just curious and willing to learn something! TIA terry

## 848. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 16:19:52 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <Oow5k.188101$6i4.148667@en-nntp-03.dc1.easynews.com>
Source record: 5035

Thanks Dave -- great post. I think I need to take the tiny little ball of mixer/filter I have, spread it out a bit, terminate all the ports properly, and start making some measurements before connecting the IF filter, etc. back up a piece at a time!

## 849. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 16:20:18 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <apw5k.191979$fB7.148976@en-nntp-06.dc1.easynews.com>
Source record: 5036

Thanks for the advice Tim; much appreciated!

## 850. Re: Causes of IF feedthru

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 16:31:37 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <Nzw5k.186485$Gv.36342@en-nntp-07.dc1.easynews.com>
Source record: 5037

"A" <arthures@panix.com> wrote in message
news:Pine.NEB.4.64.0806141738020.5719@panix3.panix.com...
> I don't have anything like the fancy gear you have and my criteria are more
> or less "if you can hear it and its OK with you, then its fine" (for
> receivers anyway).

I'm in a very fortuitous position, being somewhat a novice at RF design personally, but working at a company that's been doing it for years so I have access to a fair amount of nice test equipment. :-) Sometimes it's a little weird, though -- until a couple of years ago now we had network analyzers going to 6GHz but no scope better than 100MHz!

I think projects like the TAPR VNA (http://www.tapr.org/kits_vna.html -- now sold by Ten-Tec) are great, although it's unfortunate that it tops out at 100MHz, as in many cases one can "get by" with a lot less down at HF or even 2m than those trying to homebrew 70cm or higher gear. Even getting, say, 1GHz spectrum analyzers with tracking generators is not at all cheap (meaning, within most hobbyist's budgets, which I'd say is something $1k or less for such a device) -- there's been discussion on and off for ages on how such a tool would sell like hotcakes, given how much it would benefit homebrewers and commercial users. I kick around the idea of trying to build something like that myself, but I do already have enough experience to know that there's a very large investment in time between "design looks good on paper" and "design actually works" if you're shooting for decent dynamic ranges and resolution bandwidths.

Thanks for your input,
---Joel

## 851. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 16:33:15 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <jBw5k.158218$ea6.71575@en-nntp-01.dc1.easynews.com>
Source record: 5038

"Mark Zenier" <mzenier@eskimo.com> wrote in message
news:g2u4ni01map@enews2.newsguy.com...
> According to an article in yesterday's newspaper, (Seattle Times, sourced
> from the Christian Science Monitor and the AP), they're protecting their
> customers from child pornography.

Hahaha... but that logic, they're going to have to quit providing internet connections completely! I have no idea what the numbers are, but I suspect that a lot more child porn traverses HTTP than NTTP any day...

## 852. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 16:55:49 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <ed9fb6bf-cad5-411e-b776-b5e9a6620c26@l64g2000hse.googlegroups.com>
Source record: 5039

On Jun 14, 9:44 pm, Gary <gbel...@comcast.net> wrote:
> Looking for #20 teflon wire and of course need only a short length.
> Anyone out there have a favorite wire distributor who takes pity on us
> homebrew types and sells by the foot??  Thanks all.
>
> gary

There are a number of guys on E-bay who sell short (5, 10, 50 ft)
lengths of teflon hookup wire, usually the good silver-plated stranded
stuff (although some oddball types like solid silver occasionally show
up too!). Their main market seems to be audiophile amp builders.

CAT5E teflon wire has 24AWG conductors.

McMaster-Carr will sell you teflon tubing (no wire inside) by the
foot. Add your own wire!

Tim.

## 853. Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 21:05:23 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <rAA5k.186489$Gv.71007@en-nntp-07.dc1.easynews.com>
Source record: 5040

Just curious... does anyone know what sort of architecture you find in your typical HT or mobile "receives everything from 100kHz - 1.3GHz!" radio to generate such a vast range of frequencies while still keeping the prices so low (plenty are available for <$200, and I can't expect the LO makes up a particularly large percentage of that total price)? I would tend to lean towards something PLL-based given the typically channelized nature of available frequencies, but a single PLL would still need a VCO with a huge tuning range. So... perhaps a pair of mixed PLLs, with one doing the fine tuning and another the coarse tuning (having been multiplied up from a low frequency)?

I attempted to decipher the schematic included with my Yaesu FTM-10R, but everything is so tiny it was rather hopeless!

I don't suppose any of the reviews ever go through and sweep the LOs while watching for the worst case spur conditions, do they?

---Joel

## 854. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 21:18:37 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <3NA5k.642$oY2.212@newsfe21.lga>
Source record: 5041

"Joel Koltner" <zapwireDASHgroups@yahoo.com> wrote in message
news:jBw5k.158218$ea6.71575@en-nntp-01.dc1.easynews.com...
> "Mark Zenier" <mzenier@eskimo.com> wrote in message
> news:g2u4ni01map@enews2.newsguy.com...
>> According to an article in yesterday's newspaper, (Seattle Times, sourced
>> from the Christian Science Monitor and the AP), they're protecting their
>> customers from child pornography.
>
> Hahaha... but that logic, they're going to have to quit providing internet
> connections completely! I have no idea what the numbers are, but I
> suspect that a lot more child porn traverses HTTP than NTTP any day...
>

All they have to do is to subscribe to a commercial news account
and they will have access to everything they had before, and more.

>

## 855. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 21:22:14 UTC
From: Postipoika <pikkupoika.postiljooni@hotmail.com>
Message-ID: <4856d95d$0$14998$4f793bc4@news.tdc.fi>
Source record: 5042

Joel Koltner kirjoitti:
> Just curious... does anyone know what sort of architecture you find in your
> typical HT or mobile "receives everything from 100kHz - 1.3GHz!" radio to
> generate such a vast range of frequencies while still keeping the prices so
> low (plenty are available for <$200, and I can't expect the LO makes up a
> particularly large percentage of that total price)? I would tend to lean
> towards something PLL-based given the typically channelized nature of
> available frequencies, but a single PLL would still need a VCO with a huge
> tuning range. So... perhaps a pair of mixed PLLs, with one doing the fine
> tuning and another the coarse tuning (having been multiplied up from a low
> frequency)?
>
> I attempted to decipher the schematic included with my Yaesu FTM-10R, but
> everything is so tiny it was rather hopeless!
>
> I don't suppose any of the reviews ever go through and sweep the LOs while
> watching for the worst case spur conditions, do they?
>
> ---Joel
>
>
Solution for LO maybe is DDS.
The practical solution of DDS is is extremely simple and cheap.
Please google word "DDS"

-- postipoika

# 856. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 21:53:01 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <moednchanu4sfcvVnZ2dnUVZ_v_inZ2d@web-ster.com>
Source record: 5043

Joel Koltner wrote:
> Just curious... does anyone know what sort of architecture you find in your
> typical HT or mobile "receives everything from 100kHz - 1.3GHz!" radio to
> generate such a vast range of frequencies while still keeping the prices so
> low (plenty are available for <$200, and I can't expect the LO makes up a
> particularly large percentage of that total price)? I would tend to lean
> towards something PLL-based given the typically channelized nature of
> available frequencies, but a single PLL would still need a VCO with a huge
> tuning range. So... perhaps a pair of mixed PLLs, with one doing the fine
> tuning and another the coarse tuning (having been multiplied up from a low
> frequency)?
>
> I attempted to decipher the schematic included with my Yaesu FTM-10R, but
> everything is so tiny it was rather hopeless!
>
> I don't suppose any of the reviews ever go through and sweep the LOs while
> watching for the worst case spur conditions, do they?
>
> ---Joel
>
>
I suspect that they first upconvert to somewhat higher than the 1.3GHz
upper frequency limit, then use a roofing filter with however many itty
bitty IFs it takes to get back down to a reasonable bandpass filter.

I also suspect that the receiver receives everything kinda well, not
superlatively.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 857. Re: REMOVING ENAMEL COATING

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 22:19:32 UTC
From: abcd815 <abcd815.29cd0b9@radiobanter.com>
Message-ID: <abcd815.29cd0b9@radiobanter.com>
Source record: 5048

旅游--人民网让欧洲旅游能
够实实在在的消费,能够诚&
#20449;的消费,同时能够满意的&#
28040;费,真正树立一个诚信云&#2
1335;、诚
旅游频道_新华网英文旅游&
#20070;都江堰义卖|报恩寺恢复&#
32500;修需5500万
北京29处应急避难场所公布
公园景观平时供人游赏...&#22826
;原旅游两项新规
市民举报旅游企业违规可&#
33719;奖励
克什克腾旗国家生态旅游&#
26381;务标准化示范区揭牌...千&
#40857;网--旅游8个最适合男人美
国旅游
云南澡堂会"艳浴"记
欧洲九大著名购物村...爱&#22025
;途联合千龙旅游推出境游&
#20302;价新概念
• 甘肃自然保护区
102只大熊猫生死不明
•
京五星级宾馆奥运期间标&#
38388;均价3263元...趣途旅游网-旅&#28
216;超市英国两户人闹纠纷&#2459
4;造"马尔代夫旅游"
反成旅游热点 •
享受最顶级的奢华
曼谷高尔夫之旅(组图)...北&#201
40;新华国际旅游有限公司
¥17000
美国东西海岸十四日探访&#
21517;校国际
享游假期-北京青年旅行社&
#23448;园营
¥30000 "...

--
abcd815

# 858. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 23:05:41 UTC
From: andrew cuomo <control@control.com>
Message-ID: <ndsd54psb9bmsftfp59q4dljmf0n5hk1b8@4ax.com>
Source record: 5044

On Mon, 16 Jun 2008 17:18:37 -0400, "Tio Pedro"
<radioconnection@cox.net> wrote:

>
>"Joel Koltner" <zapwireDASHgroups@yahoo.com> wrote in message
>news:jBw5k.158218$ea6.71575@en-nntp-01.dc1.easynews.com...
>> "Mark Zenier" <mzenier@eskimo.com> wrote in message
>> news:g2u4ni01map@enews2.newsguy.com...
>>> According to an article in yesterday's newspaper, (Seattle Times, sourced
>>> from the Christian Science Monitor and the AP), they're protecting their
>>> customers from child pornography.
>>
>> Hahaha... but that logic, they're going to have to quit providing internet
>> connections completely! I have no idea what the numbers are, but I
>> suspect that a lot more child porn traverses HTTP than NTTP any day...
>>
>
>All they have to do is to subscribe to a commercial news account
>and they will have access to everything they had before, and more.

Kaching$$$

## 859. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 23:08:51 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <aoC5k.60569$dq6.23414@en-nntp-09.dc1.easynews.com>
Source record: 5045

"Postipoika" <pikkupoika.postiljooni@hotmail.com> wrote in message
news:4856d95d$0$14998$4f793bc4@news.tdc.fi...
> Solution for LO maybe is DDS.

That's a big "maybe" -- even the fastest DDSes aren't much better than 1GSps or thereabouts, giving a realistic tuning range of 0-400MHz... and those parts are quite power hungry and not at all cheap (e.g., Analog Devices' AD9858 is several watts and nearly $50 even in quantities of 1000!). On the other hand, one of the much lower frequency DDSes in conjunction with a mixer would probably work well -- although it just shifts the problem to how to get nice and pure, very wide range fixed frequencies to mix with. (E.g., DDS does 0-200MHz, so now you need just, say, a 200MHz+/-IF, 400MHz+/-IF, 600MHz+/-IF, etc. oscillators to mix with...)

Of course with the very fine-grained frequency resolution of a DDS, multiplying the output up would seem to be an obvious approach, but I'm told this isn't typically used due to the relatively high spur levels of the DDS itself.

---Joel

## 860. Re: TimeWarner discontinues usenet news

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-16 23:11:28 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <CqC5k.226452$ng7.57187@en-nntp-05.dc1.easynews.com>
Source record: 5046

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:3NA5k.642$oY2.212@newsfe21.lga...
> All they have to do is to subscribe to a commercial news account
> and they will have access to everything they had before, and more.

Sure, I use Forte for all of $2.95 per month
(http://www.forteinc.com/apn/index.php), and I've never come *close* to the
10GB/month transfer limit, although of course I'm not downloading warez nor
kiddie porn!

I can see people being upset with Time-Warner's decision, though --
effectively it does translate into a rate hike.

# 861. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-17 00:42:38 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <42fa9860-9e6e-4fa5-a8bc-dcc86d0b0901@u12g2000prd.googlegroups.com>
Source record: 5047

Joel Koltner wrote:
> Just curious... does anyone know what sort of architecture you find in your
> typical HT or mobile "receives everything from 100kHz - 1.3GHz!" radio to
> generate such a vast range of frequencies while still keeping the prices so
> low (plenty are available for <$200, and I can't expect the LO makes up a
> particularly large percentage of that total price)? I would tend to lean
> towards something PLL-based given the typically channelized nature of
> available frequencies, but a single PLL would still need a VCO with a huge
> tuning range. So... perhaps a pair of mixed PLLs, with one doing the fine
> tuning and another the coarse tuning (having been multiplied up from a low
> frequency)?
>
> I attempted to decipher the schematic included with my Yaesu FTM-10R, but
> everything is so tiny it was rather hopeless!
>
> I don't suppose any of the reviews ever go through and sweep the LOs while
> watching for the worst case spur conditions, do they?

The HT-class wideband receivers typically will have a first IF in the
45 or 70 MHz range, and use a number of different PLL's one for each
different band. Each PLL is literally less than a square cm on the
PCB, and there's a lot of them.

At least one Sony from the mid 90's had a 10.7MHz second IF, and if
the frequency you wanted was anywhere near the first IF of 70MHz, then
they skipped the first IF and went straight to the second IF.

For FM the 10.7MHz IF is the ending point... for non-WBFM modes there
was a third IF of 455kc with some ceramic filters.

Some of the HT's have 5kHz channel spacing on the HF band with no
finer tuning available (OK for SWLing but nothing else), but the
slightly better ones have finer tuning in the HF range thanks to a the
2nd or 3rd LO being a PLL too.

Image rejection is nearly completely nonexistent.

Tim.

## 862. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-17 07:28:41 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.06.17.07.28.40.974751@localhost.localdomain>
Source record: 5049

On Sat, 14 Jun 2008 18:44:04 -0700, Gary wrote:

>
>
> Looking for #20 teflon wire and of course need only a short length.
> Anyone out there have a favorite wire distributor who takes pity on us
> homebrew types and sells by the foot?? Thanks all.
>
> gary

www.apexjr.com

Cheers!

# 863. Codewheel Generator for Homebrew Optical Encoders

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-17 11:27:25 UTC
From: Tom2000 <abuse@giganews.net>
Message-ID: <sj7f54dsblkmal38en143fulo1940m5frq@4ax.com>
Source record: 5050

Howdy, Folks,

I recently released a freeware Win98/2000/XP/Vista program that generates codewheel images and prints them to any home inkjet or laser printer.

With a good codewheel in hand, you can build your own optical encoder.

I tried to generalize the program with six "canned" wheel types, plus a user-defined wheel type that lets you design a codewheel for just about any application you can imagine.

The program can generate wheels from one to eight tracks, at user-specified size and resolution.

My favorite feature is its automatic 1:1, no hassle printing. Want a 2" diameter wheel? Set it for 2" outside diameter, and the wheel image will automatically print at 2" diameter. No muss, no fuss.

You can spec the wheel image's resolution to anything practical. If you have access to better printers than you might find at home, or want to produce your wheels via photolithography, you can export the image as a .BMP file, as either a positive or negative image.

And did I mention that it's free? It's so free that I don't even have any advertising on my web page.

Speaking of my web page, I think I should probably tell you where to find it:

http://www.mindspring.com/~tom2000/Delphi/Codewheel.html

Very 73,

Tom AB9B

## 864. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-17 12:51:22 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <1136e6c7-aa71-42c3-be10-1c55de2f8148@k30g2000hse.googlegroups.com>
Source record: 4901

On Jun 14, 8:44 pm, Gary <gbel...@comcast.net> wrote:
> Looking for #20 teflon wire and of course need only a short length.
> Anyone out there have a favorite wire distributor who takes pity on us
> homebrew types and sells by the foot??  Thanks all.
>
> gary

http://www.rfparts.com/combiner.html#special

## 865. inductor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 14:36:05 UTC
From: francesco.messineo@gmail.com
Message-ID: <78e2acc7-5949-4eb0-975b-be803ca5358e@k13g2000hse.googlegroups.com>
Source record: 4902

Hello,
in an old VFO project that I'd like to duplicate (seems easy and
stable enough for me), the inductors (2) are specified as a number of
turns on a 5mm former with
"purple core". Now I know what a 5mm former might be, but I surely
don't have any idea what a purple core is and how to recognize it on
my parts department :-)
Any info is appreciated, thanks in advance.

Francesco IZ8DWF

## 866. Re: inductor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 15:37:21 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <is2dnTJjV9MstsTVnZ2dnUVZ_uWdnZ2d@web-ster.com>
Source record: 4903

francesco.messineo@gmail.com wrote:
> Hello,
> in an old VFO project that I'd like to duplicate (seems easy and
> stable enough for me), the inductors (2) are specified as a number of
> turns on a 5mm former with
> "purple core". Now I know what a 5mm former might be, but I surely
> don't have any idea what a purple core is and how to recognize it on
> my parts department :-)
> Any info is appreciated, thanks in advance.
>
> Francesco IZ8DWF

Some company in Europe that was popular with amateurs made ferrite or iron-powder cores and color coded the mixes. Purple doesn't match the color codes for Micro-Metals cores that are available in the US, so it's not one of theirs (or it's an obscure one).

You may be able to figure out the inductance, and make the inductor some other way. This takes away some of the 'easy', but it's at least a method.

If you can post the schematic and the operating frequency somewhere, someone here may take a stab at suggesting an inductance.

Or wait and see if someone in Europe or with experience with European parts gives you a response.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

## 867. Re: inductor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 15:46:18 UTC
From: francesco.messineo@gmail.com
Message-ID: <816ed3c9-30dd-4859-aff1-096354b4a063@k30g2000hse.googlegroups.com>
Source record: 4904

On 18 Giu, 17:37, Tim Wescott <t...@seemywebsite.com> wrote:
> francesco.messi...@gmail.com wrote:
> > Hello,
> > in an old VFO project that I'd like to duplicate (seems easy and
> > stable enough for me), the inductors (2) are specified as a number of
> > turns on a 5mm former with
> > "purple core". Now I know what a 5mm former might be, but I surely
> > don't have any idea what a purple core is and how to recognize it on
> > my parts department :-)
> > Any info is appreciated, thanks in advance.
>
> > Francesco IZ8DWF
>
> Some company in Europe that was popular with amateurs made ferrite or
> iron-powder cores and color coded the mixes. Purple doesn't match the
> color codes for Micro-Metals cores that are available in the US, so it's
> not one of theirs (or it's an obscure one).
>
> You may be able to figure out the inductance, and make the inductor some
> other way. This takes away some of the 'easy', but it's at least a method.
>
> If you can post the schematic and the operating frequency somewhere,
> someone here may take a stab at suggesting an inductance.
>

the schematic is 470K pdf, write me privately and I'll send it.
Thanks for help.

Francesco IZ8DWF

## 868. Re: inductor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 16:02:14 UTC
From: francesco.messineo@gmail.com
Message-ID: <bdd47766-3a89-49e3-9bdb-d00104651efb@34g2000hsh.googlegroups.com>
Source record: 4905

On 18 Giu, 17:37, Tim Wescott <t...@seemywebsite.com> wrote:
> francesco.messi...@gmail.com wrote:
> > Hello,
> > in an old VFO project that I'd like to duplicate (seems easy and
> > stable enough for me), the inductors (2) are specified as a number of
> > turns on a 5mm former with
> > "purple core". Now I know what a 5mm former might be, but I surely
> > don't have any idea what a purple core is and how to recognize it on
> > my parts department :-)
> > Any info is appreciated, thanks in advance.
>
> > Francesco IZ8DWF
>
> Some company in Europe that was popular with amateurs made ferrite or
> iron-powder cores and color coded the mixes. Purple doesn't match the
> color codes for Micro-Metals cores that are available in the US, so it's
> not one of theirs (or it's an obscure one).
>
> You may be able to figure out the inductance, and make the inductor some
> other way. This takes away some of the 'easy', but it's at least a method.
>

Well, actually the inductances should be approximately 76 nH and 9.2
uH according to the frequency range of the VFO. But not having a
reliable method to determine cores characteristics from the ones found
on the parts box, I'd rather identify the good cores in some other
manner.
The long way will be just winding some (random?) number of turns on
random cores and see where it goes to oscillate, if oscillating at
all :-) But it's true, it's not as easy as before, and still wouldn't
tell me if the selected core is well suited for the frequency range
I'm interested in.

Francesco IZ8DWF

## 869. Re: inductor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 20:18:58 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <1f6fb45c-a315-4199-b38e-076c7b864c1d@m36g2000hse.googlegroups.com>
Source record: 4906

On 18 Jun, 17:02, francesco.messi...@gmail.com wrote:
> On 18 Giu, 17:37, Tim Wescott <t...@seemywebsite.com> wrote:
>
>
>
> > francesco.messi...@gmail.com wrote:
> > > Hello,
> > > in an old VFO project that I'd like to duplicate (seems easy and
> > > stable enough for me), the inductors (2) are specified as a number of
> > > turns on a 5mm former with
> > > "purple core". Now I know what a 5mm former might be, but I surely
> > > don't have any idea what a purple core is and how to recognize it on
> > > my parts department :-)
> > > Any info is appreciated, thanks in advance.
>
> > > Francesco IZ8DWF
>
> > Some company in Europe that was popular with amateurs made ferrite or
> > iron-powder cores and color coded the mixes.  Purple doesn't match the
> > color codes for Micro-Metals cores that are available in the US, so it's
> > not one of theirs (or it's an obscure one).
>
> > You may be able to figure out the inductance, and make the inductor some
> > other way.  This takes away some of the 'easy', but it's at least a method.
>
> Well, actually the inductances should be approximately 76 nH and 9.2
> uH according to the frequency range of the VFO. But not having a
> reliable method to determine cores characteristics from the ones found
> on the parts box, I'd rather identify the good cores in some other
> manner.
> The long way will be just winding some (random?) number of turns on
> random cores and see where it goes to oscillate, if oscillating at
> all :-) But it's true, it's not as easy as before, and still wouldn't
> tell me if the selected core is well suited for the frequency range
> I'm interested in.
>
> Francesco IZ8DWF

Neosid coil formers and cores have always been popular in Europe. They
are still made, but it can be difficult to buy them.

Leon

# 870. Re: inductor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 20:39:00 UTC
From: "Derek R. Smith" <Derek@multnomah.demon.co.uk>
Message-ID: <elLkKXAkJXWIFw7L@multnomah.demon.co.uk>
Source record: 4907

The following link will take you to some of the Denco (and other
manufacturer's) data sheets about the old coil formers and dust-cores.

http://vintageradio.me.uk/info/dencocoils.htm

Hope this helps

Derek.

In message
<78e2acc7-5949-4eb0-975b-be803ca5358e@k13g2000hse.googlegroups.com>,
francesco.messineo@gmail.com writes
>Hello,
>in an old VFO project that I'd like to duplicate (seems easy and
>stable enough for me), the inductors (2) are specified as a number of
>turns on a 5mm former with
>"purple core". Now I know what a 5mm former might be, but I surely
>don't have any idea what a purple core is and how to recognize it on
>my parts department :-)
>Any info is appreciated, thanks in advance.
>
>Francesco IZ8DWF

--
Derek R. Smith.

## 871. Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 21:28:54 UTC
From: Al <no.spam@wanted.com>
Message-ID: <q6f6k.61015$Ni1.7141@trnddc01>
Source record: 4908

I have sent the following to Verizon. I hope more do the same. They are eliminating access to all but 8 supergroups.

Why are you deleting perfectly good newsgroups from your service? I routinely access the following"
alt.autos.jaguar
alt.autos.subaru
alt.engineering.electrical
alt.ham-radio
alt.os.linux.ubunt
rec.radio.amateur.homebrew
If my access is denied, I will encourage my Senate and House delegations to enact legistation that will restore my legitimate access to these groups. I think the last thing you would want is more legislation on your networks.

Al

# 872. Re: Codewheel Generator for Homebrew Optical Encoders

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-18 22:12:25 UTC
From: Postipoika <pikkupoika.postiljooni@hotmail.com>
Message-ID: <48598819$0$14991$4f793bc4@news.tdc.fi>
Source record: 4909

Tom2000 kirjoitti:
> Howdy, Folks,
>
> I recently released a freeware Win98/2000/XP/Vista program that
> generates codewheel images and prints them to any home inkjet or laser
> printer.

>
> Speaking of my web page, I think I should probably tell you where to
> find it:
>
> http://www.mindspring.com/~tom2000/Delphi/Codewheel.html
>
>
> Very 73,
>
> Tom AB9B
>
>

Thanks Tom

I will try. DIY is my fun
Now in my test circuit is a cheap mechanical front panel encoder.
Only 16 steps/rev.
It doesn't satisfy me.
Shaft has no bearings in mounting and it has inconvenient play.

postipoika

## 873. Re: inductor help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-19 06:02:06 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <DemdnR0iGLkD18fVnZ2dnUVZ8rednZ2d@pipex.net>
Source record: 4911

francesco.messineo@gmail.com wrote:
> Hello,
> in an old VFO project that I'd like to duplicate (seems easy and
> stable enough for me), the inductors (2) are specified as a number of
> turns on a 5mm former with
> "purple core". Now I know what a 5mm former might be, but I surely
> don't have any idea what a purple core is and how to recognize it on
> my parts department :-)
> Any info is appreciated, thanks in advance.
>
> Francesco IZ8DWF
==========
Purple coloured toroids are for example Ni-Zn ferrite type 4C65 made by
Philips.
For inductors used in frequency determining circuits (vfo), powder-iron
cores are normally used .

Ferrite for RF applications is usually applied in chokes , baluns, ununs.

Frank GM0CSZ / KN6WH

## 874. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-19 11:21:29 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.06.19.11.21.17.274104@localhost.localdomain>
Source record: 4910

Unfortunately, nothing to do with the net is a protected right, it is a privilege. Most ISP's don't even know what Usenet is let alone carry it.

I buy blocks from Octanews, because while my current ISP has access, they cap it at 16Kb/s. Makes downloading mp3's on my cellphone faster. Octanews blocks aren't limited as to speed, just Mbytes.

Good luck!

--
Gregg

## 875. Soundcard Interface for IC 730

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-19 18:41:05 UTC
From: tomcorker@googlemail.com
Message-ID: <643befea-a057-486c-9064-f4c44645da7b@i18g2000prn.googlegroups.com>
Source record: 4912

I am currently building a radio - sound card interface for my IC-730 so i can use PSK31. AIUI, the mic that came with the rig contains a preamp, so presumably the radio is expecting an audio level above a usual mic. Does this mean I can simply use the audio level from the sound card straight into the Mic input on the radio via a 1:1 transformer for isolation, with no need for a voltage divider to bring the level down?

Thanks.

## 876. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-19 23:47:18 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <5eC6k.179351$pm2.3618@en-nntp-04.dc1.easynews.com>
Source record: 4913

"geek" <geek@localhost.localdomain> wrote in message
news:pan.2008.06.19.11.21.17.274104@localhost.localdomain...
> Unfortunately, nothing to do with the net is a protected right, it is a
> privilege.

Actually it's a contractual agreement between you and your ISP, but
realistically most "consumer grade" ISPs promise nothing -- no guarantees on
speed, services, ports, uptime, etc.!

# 877. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-20 00:48:16 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0806192046380.9693@panix1.panix.com>
Source record: 4914

You might try access via google (groups.google.com) and web browsing.
Also, look at other ISPs. There are a lot out there. Lots are more
friendly to the old "free" internet spirit. I use www.panix.com quite a
bit of the time. There are many others.

======= no change to below, included for reference and context ====

On Wed, 18 Jun 2008, Al wrote:

> I have sent the following to Verizon. I hope more do the same. They are
> eliminating access to all but 8 supergroups.
>
>
> Why are you deleting perfectly good newsgroups from your service? I
> routinely access the following"
> alt.autos.jaguar
> alt.autos.subaru
> alt.engineering.electrical
> alt.ham-radio
> alt.os.linux.ubunt
> rec.radio.amateur.homebrew
> If my access is denied, I will encourage my Senate and House delegations
> to enact legistation that will restore my legitimate access to these
> groups. I think the last thing you would want is more legislation on your
> networks.
>
> Al
>

# 878. Re: Soundcard Interface for IC 730

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-20 03:28:05 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <pLmdnaWVmpxv6sbVnZ2dnUVZ8vqdnZ2d@pipex.net>
Source record: 4915

tomcorker@googlemail.com wrote:
> I am currently building a radio - sound card interface for my IC-730
> so i can use PSK31. AIUI, the mic that came with the rig contains a
> preamp, so presumably the radio is expecting an audio level above a
> usual mic. Does this mean I can simply use the audio level from the
> sound card straight into the Mic input on the radio via a 1:1
> transformer for isolation, with no need for a voltage divider to bring
> the level down?
>
> Thanks.
==========
Transformer does not need to be 1:1 exactly
Suggest you include an approx 1000 Ohms trimpot to fine adjust the mic
port input from the transformer. Assuming the radio audio input
impedance is in the order of 500 Ohms.

Frank GM0CSZ / KN6WH

# 879. Re: Soundcard Interface for IC 730

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-20 12:34:42 UTC
From: Postipoika <pikkupoika.postiljooni@hotmail.com>
Message-ID: <485ba3ad$0$23817$4f793bc4@news.tdc.fi>
Source record: 4916

Highland Ham kirjoitti:
> tomcorker@googlemail.com wrote:
>> I am currently building a radio - sound card interface for my IC-730
>> so i can use PSK31. AIUI, the mic that came with the rig contains a
>> preamp, so presumably the radio is expecting an audio level above a
>> usual mic. Does this mean I can simply use the audio level from the
>> sound card straight into the Mic input on the radio via a 1:1
>> transformer for isolation, with no need for a voltage divider to bring
>> the level down?
>>
>> Thanks.
> ====================================
> Transformer does not need to be 1:1 exactly
> Suggest you include an approx 1000 Ohms trimpot to fine adjust the mic
> port input from the transformer. Assuming the radio audio input
> impedance is in the order of 500 Ohms.
>
>
> Frank GM0CSZ / KN6WH
>
>
>
>
Please note that a single trafo only in mic line doesn't isolate
satisfactory.
Otherwise there will still remain humming earth loops.

If your rig has a phone patch or a line input it is preferred to use
these. You need not to play with plugs .
In many rigs the VOX is not controlled via line input. In that case PTT
rules on the air.

Be ready to use a trafo also in headphone output line and a relay or an
opto isolator for PTT.

It is most simple to use COM port RTS or DTR for PTT.
KISS: Connect a high bright led and a 5V dil relay in series directly
into RTS. Led is very nice to show "On the Air".

postipoika

# 880. Re: Soundcard Interface for IC 730

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-20 12:56:53 UTC
From: tomcorker@googlemail.com
Message-ID: <336a4016-4be2-4610-9014-977e89645bd7@j22g2000hsf.googlegroups.com>
Source record: 4917

On 20 Jun, 04:28, Highland Ham <abcgm0csz.kn6wh...@dsl.pipex.com>
wrote:

> 
> ====================================
> Transformer does not need to be 1:1 exactly
> Suggest you include an approx 1000 Ohms trimpot to fine adjust the mic
> port input from the transformer.  Assuming the radio audio input
> impedance is in the order of 500 Ohms.
> 
> Frank     GM0CSZ / KN6WH

Thanks. I'll give that a try.

# 881. Re: Soundcard Interface for IC 730

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-20 13:00:43 UTC
From: tomcorker@googlemail.com
Message-ID: <a179c84b-d607-486f-97a8-489fa85f3f91@x35g2000hsb.googlegroups.com>
Source record: 4918

On 20 Jun, 13:34, Postipoika <pikkupoika.postiljo...@hotmail.com>
wrote:
>
> Please note that a single trafo only in mic line doesn't isolate
> satisfactory.
> Otherwise there will still remain humming earth loops.
>
> If your rig has a phone patch or a line input it is preferred to use
> these. You need not to play with plugs .
> In many rigs the VOX is not controlled via line input. In that case PTT
> rules on the air.
>
> Be ready to use a trafo also in headphone output line and a relay or an
> opto isolator for PTT.
>
> It is most simple to use COM port RTS or DTR for PTT.
> KISS: Connect a high bright led and a 5V dil relay in series directly
> into RTS. Led is very nice to show "On the Air".
>
> postipoika

Hi Postipoika,

Unfortunately, my rig doesn't appear to have a line input, so using
the mic connector looks like the only option.

I had already planned to use another transformer to isolate the
headphone socket on the radio from the soundcard, and an optoisolator
on on RTS for PTT, although I may get away with just using the VOX.

## 882. Sell Discounts New Air Jordan1-23 Air max bape sneakers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-20 20:34:54 UTC
From: "www.24hoursneakers.com" <HHL20008@hotmail.com>
Message-ID: <1ace4314-0e07-4254-9e23-26a713dcb617@i36g2000prf.googlegroups.com>
Source record: 4919

Air Max 87 / 90 / 95 / 97 / 360 / 180 / 2003 / 2008 / TN / LTD
Sneakers,
Shox R2 / R3 / R4 / R5 / R6 / OZ / NZ / TL / Turob / BMW Sneakers

Discout Puma Trainers, Adidas Trainers, Lacoste Trainers, Jordan1-23
Sneakers, Prada Sneakers, AF1 Sneakers, Mauri Sneakers, Dsquared
Hogan Supplier.
http://groups.google.com/group/macromedia.flex.flex_builder/browse_thread/thread/c563994f4
4a2e26d

## 883. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-20 20:58:35 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <CPU6k.8715$LL4.3671@bignews7.bellsouth.net>
Source record: 4920

Al wrote:
> I have sent the following to Verizon. I hope more do the same. They are
> eliminating access to all but 8 supergroups.
>
>
> Why are you deleting perfectly good newsgroups from your service? I
> routinely access the following"
> alt.autos.jaguar
> alt.autos.subaru
> alt.engineering.electrical
> alt.ham-radio
> alt.os.linux.ubunt
> rec.radio.amateur.homebrew
> If my access is denied, I will encourage my Senate and House delegations
> to enact legistation that will restore my legitimate access to these
> groups. I think the last thing you would want is more legislation on your
> networks.
>
> Al
Right now I am using AT&T (bellsouth) DSL. If they drop the news groups
and Comcast doesn't, I think bellsouth will lose both my phone and
internet business. It's nice to have TWO providers of the same service
competing with each other!

## 884. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-21 11:04:24 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <3d6dnT6Cq6z-fcHVnZ2dneKdnZydnZ2d@pipex.net>
Source record: 4921

ken scharf wrote:
> Right now I am using AT&T (bellsouth) DSL. If they drop the news groups
> and Comcast doesn't, I think bellsouth will lose both my phone and
> internet business. It's nice to have TWO providers of the same service
> competing with each other!
==========
Agreed, this is rather OT ,but if you have a (A)DSL connection with a
provider in the USA , do you have to 'sit out' a say 12 months contract
before you can switch or can you switch at any time ?

Frank GM0CSZ / KN6WH

## 885. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-21 14:10:11 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <iZ77k.1738$%q.1060@newsfe24.lga>
Source record: 4922

"Gary" <gbelcas@comcast.net> wrote in message
news:atKdnUYS1-t57snVnZ2dnUVZ_r7inZ2d@comcast.com...
>
>
> Looking for #20 teflon wire and of course need only a short length. Anyone
> out there have a favorite wire distributor who takes pity on us
> homebrew types and sells by the foot?? Thanks all.
>
> gary

I wish you'd respond to the question of how many feet you
need. I received your email, but you never answered the
question of how many feet a "short length" consists of.

# 886. Re: Soundcard Interface for IC 730

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-21 17:44:56 UTC
From: gb <w9nogbspam@arrlspamno.net>
Message-ID: <l7SdnVdJdtS6o8DVnZ2dnUVZ_vjinZ2d@comcast.com>
Source record: 4923

<tomcorker@googlemail.com> wrote in message
news:a179c84b-d607-486f-97a8-489fa85f3f91@x35g2000hsb.googlegroups.com...
> On 20 Jun, 13:34, Postipoika <pikkupoika.postiljo...@hotmail.com>
> wrote:
>>
>> Please note that a single trafo only in mic line doesn't isolate
>> satisfactory.
>> Otherwise there will still remain humming earth loops.
>>
>> If your rig has a phone patch or a line input it is preferred to use
>> these. You need not to play with plugs .
>> In many rigs the VOX is not controlled via line input. In that case PTT
>> rules on the air.
>>
>> Be ready to use a trafo also in headphone output line and a relay or an
>> opto isolator for PTT.
>>
>> It is most simple to use COM port RTS or DTR for PTT.
>> KISS: Connect a high bright led and a 5V dil relay in series directly
>> into RTS. Led is very nice to show "On the Air".
>>
>> postipoika
>
> Hi Postipoika,
>
> Unfortunately, my rig doesn't appear to have a line input, so using
> the mic connector looks like the only option.
>
> I had already planned to use another transformer to isolate the
> headphone socket on the radio from the soundcard, and an optoisolator
> on on RTS for PTT, although I may get away with just using the VOX.
=========
Tom -

That is correct, the low-gain or "zero" models (last digit in model number being zero of sold-state late 1970s /early 1980s vintage radios) from Icom (IC-730 being one) ..... did have this problem (pre-amp was in microphone and inside the radio on the input)
http://www.heilsound.com/amateur/tips/all_icom.htm

You are correct in that you MAY not need the voltage divider -- having an adjustable input such as that with the Jim Mitrenga, N9ART sound card interface "A Flexible Digital-Mode Interface". BTW, although that RadioShack relay is no longer available -- there is an NTE equivalent that is a "drop-in replacement".

http://www.farcircuits.net/
http://www.qsl.net/wm2u/images/interface_n9art.pdf

w9gb

## 887. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-22 18:37:31 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <sridnbO4GtF2BsPVnZ2dnUVZ_uSdnZ2d@comcast.com>
Source record: 4924

Tio Pedro wrote:
> "Gary" <gbelcas@comcast.net> wrote in message
> news:atKdnUYS1-t57snVnZ2dnUVZ_r7inZ2d@comcast.com...
>>
>> Looking for #20 teflon wire and of course need only a short length. Anyone
>> out there have a favorite wire distributor who takes pity on us
>> homebrew types and sells by the foot?? Thanks all.
>>
>> gary
>
> I wish you'd respond to the question of how many feet you
> need. I received your email, but you never answered the
> question of how many feet a "short length" consists of.
>
>

Hi Tio,

Thanks very much for your offer. Pse contact me off list @
gbelcas@comcast.net.

Gary

# 888. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-23 04:20:48 UTC
From: Wim Lewis <wiml@hhhh.org>
Message-ID: <g3n8b0$8ql$2@underhill.hhhh.org>
Source record: 4925

In article <aoC5k.60569$dq6.23414@en-nntp-09.dc1.easynews.com>,
Joel Koltner <zapwireDASHgroups@yahoo.com> wrote:
>one of the much lower frequency DDSes in conjunction with a mixer would
>probably work well -- although it just shifts the problem to how to get nice
>and pure, very wide range fixed frequencies to mix with. (E.g., DDS does
>0-200MHz, so now you need just, say, a 200MHz+/-IF, 400MHz+/-IF, 600MHz+/-IF,
>etc. oscillators to mix with...)

From reading the occasional data sheet and appnote, I have the impression
that (as Tim Wescott says) they upconvert to a high IF, like 3 GHz,
and then convert down from there.

In that case they might have an LO that tunes from 1.7-3 GHz, which is
a much smaller range, proportionally, than 100kHz-1.3GHz.

--
Wim Lewis <wiml@hhhh.org>, Seattle, WA, USA. PGP keyID 27F772C1

# 889. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-23 14:38:02 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <d2022687-ac07-4794-8e8a-c1b348f66262@a1g2000hsb.googlegroups.com>
Source record: 4926

On 16 Jun, 22:22, Postipoika <pikkupoika.postiljo...@hotmail.com>
wrote:
> Joel Koltner kirjoitti:
>
> > Just curious... does anyone know what sort of architecture you find in your
> > typical HT or mobile "receives everything from 100kHz - 1.3GHz!" radio to
> > generate such a vast range of frequencies while still keeping the prices so
> > low (plenty are available for <$200, and I can't expect the LO makes up a
> > particularly large percentage of that total price)?  I would tend to lean
> > towards something PLL-based given the typically channelized nature of
> > available frequencies, but a single PLL would still need a VCO with a huge
> > tuning range.  So... perhaps a pair of mixed PLLs, with one doing the fine
> > tuning and another the coarse tuning (having been multiplied up from a low
> > frequency)?
>
> > I attempted to decipher the schematic included with my Yaesu FTM-10R, but
> > everything is so tiny it was rather hopeless!
>
> > I don't suppose any of the reviews ever go through and sweep the LOs while
> > watching for the worst case spur conditions, do they?
>
> > ---Joel
>
> Solution for LO maybe is DDS.
> The practical solution of DDS is is extremely simple and cheap.
> Please google word "DDS"
>
> -- postipoika

My Yaesu FT-857D and FT-817ND transceivers use a PLL and DDS. The PLL
cleans up the DDS output and the DDS gives the fine tuning.

The 857 receives up to 450 MHz, and uses a 68.33 MHz first IF.

Leon

# 890. FS: New Stancor PC8411 Power/Filiment Xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-23 14:43:32 UTC
From: wa2rqy <rlucch2098@aol.com>
Message-ID: <276f8b22-d241-4099-8ae8-b7ca34a7b8f9@34g2000hsh.googlegroups.com>
Source record: 4927

Hi All;
I've been saving this for years but now realize that I'll never get to build a small CW Xmtr so its time to move it to someone who can put it to good use.
Stancor( Chicago Transformer Co.), Model PC8411, 4 hole, above the chassis mount, enclosed.
All wires are uncut & original length, some surface rust on the laminations, Bells are fine as is the yellow label.
Primary Voltage = 117V. 60 Cy.
Secondaries= 375-0-375 @ 150ma dc
Filiment= 5.0v @ 3A.
Filiment= 6.3v @ 4.5A
Weight shipped about 8.5lbs

Price is $60.00 with Priority mailing .
Will make a nice transmitter supply.
Tnx & 73.......
Rich WA2RQY/4

## 891. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-24 20:39:43 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0806241638240.11735@panix2.panix.com>
Source record: 4928

Did any of you guys look at http://groups.google.com to see if what you
want is there? There are lots of ways to connect to NG servers that are
outside of your network (unless they disable nntp protocols).

On Sat, 21 Jun 2008, Highland Ham wrote:

> ken scharf wrote:
>> Right now I am using AT&T (bellsouth) DSL. If they drop the news groups
>> and Comcast doesn't, I think bellsouth will lose both my phone and internet
>> business. It's nice to have TWO providers of the same service competing
>> with each other!
> ====================================
> Agreed, this is rather OT ,but if you have a (A)DSL connection with a
> provider in the USA , do you have to 'sit out' a say 12 months contract
> before you can switch or can you switch at any time ?
>
> Frank GM0CSZ / KN6WH
>
>

## 892. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-24 22:47:37 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrng62uc9.15dt.bit-bucket@shell.config.com>
Source record: 4929

On Tue, 24 Jun 2008 16:39:43 -0400, A wrote:
>
> Did any of you guys look at http://groups.google.com to see if what you
> want is there? There are lots of ways to connect to NG servers that are
> outside of your network (unless they disable nntp protocols).

Ya, but... Post from Google and a Great Portion of the usenet
population will never see your postings:

http://jonz.net/ng.htm

http://improve-usenet.org/

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

## 893. Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-25 03:46:47 UTC
From: john@feith.com
Message-ID: <ee282ed6-28e6-4135-97a7-5d8f56d6eaa0@59g2000hsb.googlegroups.com>
Source record: 4930

For various transmission types, how much group delay variation can be tolerated in
the receiver before it causes problems recovering the original signal? I realize that it
all depends ... I'm just interested in getting a rough idea.

For example, at what point is:

1) SSB voice reception noticeably affected?

2) the ability to receive images from weather satellites affected?

3) various amateur radio modes such as PSK31, RTTY, and MFSK16 affected?

4) HD Radio specs 600 ns as the max for the transmitter, what's the max for the receiver?

I'm curious since the group delay variation of SAW filters available for IF filtering seems
to vary widely.

-- john
john@feith.com

# 894. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-25 13:45:21 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <fa048135-72aa-4979-bdf0-5e98e4815d3a@34g2000hsf.googlegroups.com>
Source record: 4931

On Jun 24, 11:46 pm, j...@feith.com wrote:
> For various transmission types, how much group delay variation can be
> tolerated in
> the receiver before it causes problems recovering the original
> signal?  I realize that it
> all depends ... I'm just interested in getting a rough idea.
>
> For example, at what point is:
>
>   1) SSB voice reception noticeably affected?
>
>   2) the ability to receive images from weather satellites affected?
>
>   3) various amateur radio modes such as PSK31, RTTY, and MFSK16
> affected?
>
>   4) HD Radio specs 600 ns as the max for the transmitter, what's the
> max for the receiver?
>
> I'm curious since the group delay variation of SAW filters available
> for IF filtering seems
> to vary widely.

I have been playing with homebrew crystal filters (following W7ZOI and Bill Carver/K6OLG) for CW, as well as audio filters, and can tell you that on CW the difference between a super-sharp-in-frequency Chesbyshev filter (typical in ham equipment for a long time now) and a more constant-delay (e.g. Gaussian to 6dB or 12dB, or equiripple linear phase) filter is like night and day.

My impressions are done "to my ears", not to a spectrum analyzer.

The super sharp in frequency Chesbyshev filters have horrible horrible ringing especially on say 40M or 80M in the summer with the QRN. I can hardly listen for a few minutes without getting disgusted. BUT... they do have a real advantage during say a contest when there's competing signals every few hundred Hz.

At the other extreme the constant-delay filters sound remarkably clear and transparent. They do not have such a sharp stopband, but my ear makes up for that most of the time. Ringing from summertime band noise is not nearly so tiring.

Most of the filter simulation programs (AADE, SPICE, NatSemi's cool new WebBench filter tools, etc.) let you look at not just frequency response but also phase response and (maybe most importantly for

summertime QRN) impulse response. Having run the simulations and listened with my ears to my experiments this summer, I cannot emphasize how much more enjoyable it is to use a Gaussian-to-6dB or equiripple linear phase filter in CW.

Often when the bands are not crowded but there is QRN, I far far prefer a simple two-pole crystal filter designed for CW in the first place (e.g. my Heath HW-16) to any fancy-pants 8-pole or 12-pole modern filters in my new rigs.

I notice you ask about a lot of digital modes but not CW. My ears have been listening to CW for 30-some years now and I can do a lot of processing in my brain. But what my brain cannot remove is horrible filter ringing. I don't know how those other digital modes stack up... maybe computers are better at removing horrible ringing than my brain.

I don't think I have a "golden ear" or any other audiophile quality. In fact I'm pretty sure my ears are less good than they were when I was a kid doing CW.

Tim N3QE

# 895. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-25 18:14:03 UTC
From: john@feith.com
Message-ID: <9533f88d-bada-4f50-8f40-a78b2cf08c82@j22g2000hsf.googlegroups.com>
Source record: 4932

On Jun 25, 9:45 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> I have been playing with homebrew crystal filters (following W7ZOI and
> Bill Carver/K6OLG) for CW, as well as audio filters, and can tell you
> that on CW the difference between a super-sharp-in-frequency
> Chesbyshev filter (typical in ham equipment for a long time now) and a
> more constant-delay (e.g. Gaussian to 6dB or 12dB, or equiripple
> linear phase) filter is like night and day.

You wouldn't happen to know the group delay variance
of the filters you mentioned? Rough values are okay.

> I notice you ask about a lot of digital modes but not CW. My ears have
> been listening to CW for 30-some years now and I can do a lot of
> processing in my brain. But what my brain cannot remove is horrible
> filter ringing. I don't know how those other digital modes stack up...
> maybe computers are better at removing horrible ringing than my brain.

I believe that in theory if the exact group delay profile is known,
then
a digital receiver can perform a certain amount of equalization. What
I'm curious about is how much varience can be introduced by the
filters in a receiver for various transmission types without needing
to equalize.

-- John
john@feith.com

# 896. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-25 20:29:50 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <5ee20d8e-d608-4e77-935e-3cd38dd2896d@r66g2000hsg.googlegroups.com>
Source record: 4933

On Jun 25, 2:14 pm, j...@feith.com wrote:
> On Jun 25, 9:45 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
>
> > I have been playing with homebrew crystal filters (following W7ZOI and
> > Bill Carver/K6OLG) for CW, as well as audio filters, and can tell you
> > that on CW the difference between a super-sharp-in-frequency
> > Chesbyshev filter (typical in ham equipment for a long time now) and a
> > more constant-delay (e.g. Gaussian to 6dB or 12dB, or equiripple
> > linear phase) filter is like night and day.
>
> You wouldn't happen to know the group delay variance
> of the filters you mentioned?  Rough values are okay.

I haven't actually measured group delay but I'm sure that what I hear
is group delay.

If you look at published group delay graphs for commercial Chesbyshev
filters, a 500 Hz 8th-order crystal filter has a delay around 2ms in
the middle of the passband, but within 100 Hz of the edge of the
passband the delay peaks up enormously to 4ms and then back down again
over the very steep skirt.

Maybe you can turn the 2 ms variation into some inter-symbol/intra-
symbol limit for some digital modes. It rings like the dickens when
hit with QRN, that's for sure!

Tim N3QE.

# 897. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-25 21:14:40 UTC
From: K <K@spam.net>
Message-ID: <4862b545$0$18107$9a6e19ea@unlimited.newshosting.com>
Source record: 4934

test

## 898. Call friends and relatives in PA and warn them!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-25 21:24:51 UTC
From: legalmind <movingviolations@gmail.com>
Message-ID: <0b348cd1-b814-4885-8cc7-1421abc51653@j22g2000hsf.googlegroups.com>
Source record: 4935

Pa. debunks rumors of 'speeding ticket frenzy'
Philadelphia Inquirer - Philadelphia,PA,USA
"Starting today, Pennsylvania will launch a 30-day speeding ticket
frenzy. The state estimates that 9 million dollars will be generated
in speeding tickets. ...

Pa. debunks rumors of ‘speeding ticket frenzy’
By Peter Mucha

INQUIRER STAFF WRITER

An e-mail making the rounds warning of a Pennsylvania crackdown on
speeding is a mix of fact and fancy, according to state police.
The message sounds an ominous alarm:

"BULLETIN! BULLETIN! BULLETIN . . .

"Starting today, Pennsylvania will launch a 30-day speeding ticket
frenzy. The state estimates that 9 million dollars will be generated
in speeding tickets."

Judging from the date of the e-mail, "today" meant last Thursday.

"Look out for Penn dot trucks parked along the road or appearing
behind you pacing you," the e-mail warns.

"It could be a Trooper driving the truck, it is called 'Operation
Yellow Jacket' and will be off and on all summer."

Better keep that cruise control to 2 m.p.h. over the limit to be safe,
the e-mail advises.

Actually, this ticket-frenzy e-mail is nothing new.

In April, state police issued a press release advising that it's all a
hoax.

"The misinformation in this e-mail is an urban legend that originated
in New Jersey in May 2005," the release stated. "Since then, the hoax
has targeted police in several other states."

Yes, troopers give tickets to speeders, said Sgt. Edward Murphy,
station commander of the Dublin Barracks. But no, there's no special
crackdown on speeding this summer, he said.

Monday was, however, the start of a two-week campaign called Smooth
Operator in Pennsylvania and New Jersey.

The program, which targets aggressive drivers, has been conducted periodically in Pennsylvania since 2006.

But the e-mail is correct about one thing: Operation Yellow Jacket does exist, Murphy said.

"It's a statewide program," he said. "It's the use of PennDot vehicles to run radar from."

The vehicles are generally parked at the side of the road - not necessarily in work zones - but are not used to pace motorists, he said.

The program's purpose is not just to catch speeders but also to remind motorists to be careful around any work crews and emergency vehicles.

"They should be slowing down when there's anything on the side of the road," Murphy said.

Under the state's Steer Clear Law, motorists are required, if reasonably possible, to move out of the lane nearest to construction crews, police making traffic stops, or tow trucks assisting disabled vehicles.

Anyone who receives the hoax e-mail should delete it, state police said in its April press release.

"The Department suggests that anyone who receives such an e-mail to simply delete it," the April press release continued. ". . . The Department never issues traffic citations as a way of raising funds for the state."

## 899. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 03:57:59 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0806252352340.15683@panix3.panix.com>
Source record: 4936

On Tue, 24 Jun 2008, Allodoxaphobia wrote:

> On Tue, 24 Jun 2008 16:39:43 -0400, A wrote:
>>
>> Did any of you guys look at http://groups.google.com to see if what you
>> want is there? There are lots of ways to connect to NG servers that are
>> outside of your network (unless they disable nntp protocols).
>
> Ya, but... Post from Google and a Great Portion of the usenet
> population will never see your postings:

I have access to three non-Google ISPs and in recent months, the posts have been getting out to all of them just as fast as I can log onto them by telnet and check for myself. They have improved over, say, a year ago.

Whether your post gets "out" far onto the net depends at least to some degree on where on the net your ISP is located and what kind of traffic flows there. I've had experience with about a dozen UNIX shell account ISPs over the last 15 years and in the past there were quite a few that did _not_ have good connectivity with other ISPs through the nntp protocol. I'm not overly happy with Google for NG access, but if anyone is unhappy with their own ISP's NG server (they can subscribe or block whatever NGs they feel like) then certainly they should try Google. And, you can even use Google (and other "portals") to find other NG accesses.

> http://jonz.net/ng.htm
>
> http://improve-usenet.org/
>
> Jonesy
> --
> Marvin L Jones | jonz | W3DHJ | linux
> 38.24N 104.55W | @ config.com | Jonesy | OS/2
> *** Killfiling google posts: <http://jonz.net/ng.htm>
>

## 900. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 04:01:43 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0806252355280.8467@darkstar.example.org>
Source record: 4937

On Wed, 25 Jun 2008, A wrote:

>
>
> On Tue, 24 Jun 2008, Allodoxaphobia wrote:
>
>> On Tue, 24 Jun 2008 16:39:43 -0400, A wrote:
>>>
>>> Did any of you guys look at http://groups.google.com to see if what you
>>> want is there? There are lots of ways to connect to NG servers that are
>>> outside of your network (unless they disable nntp protocols).
>>
>> Ya, but... Post from Google and a Great Portion of the usenet
>> population will never see your postings:
>
> I have access to three non-Google ISPs and in recent months, the posts have
> been getting out to all of them just as fast as I can log onto them by telnet
> and check for myself. They have improved over, say, a year ago.
>
You miss the point, though I'm tired of seeing all this off-topic
discussion in every newsgroup as the clueless post about it rather
than know what's happening and finding the right place to post.

He's saying that many will filter out posts from google. Too much
spam, but too much cluelessness. People posting from google without
any awareness of where they are. People posting from google without
quoting what they are replying to. People posting from google and
being clueless about how others see the newsgroup, so they think
doing things like replying to spam with an empty message but a different
subject header will "fix things"; the rest of the world sees an empty
message that requires effort to figure out what the post is about since
we don't see it all on one webpage. Google has made it too easy
for people to post to Usenet, so they can post without giving any
thought to what already exists. They too often think a newsgroup
is a hangout, where anything goes so long as everyone shares the
common interest of the newsgroup. SO rather than find a newsgroup
where a post is on-topic, they post where their "buddies" are.

With each little bit, the newsgroups degrade just a little bit more.
Drive out the ones who know what they are doing, and then the clueless
can do whatever they like.

Michael VE2BVW

# 901. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 07:32:03 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <ctf664hiup02n43d6nfahjgnmh4drun0i8@4ax.com>
Source record: 4938

On Wed, 25 Jun 2008 11:14:03 -0700 (PDT), john@feith.com wrote:

>On Jun 25, 9:45ï¿½am, Tim Shoppa <sho...@trailing-edge.com> wrote:
>> I have been playing with homebrew crystal filters (following W7ZOI and
>> Bill Carver/K6OLG) for CW, as well as audio filters, and can tell you
>> that on CW the difference between a super-sharp-in-frequency
>> Chesbyshev filter (typical in ham equipment for a long time now) and a
>> more constant-delay (e.g. Gaussian to 6dB or 12dB, or equiripple
>> linear phase) filter is like night and day.
>
>You wouldn't happen to know the group delay variance
>of the filters you mentioned? Rough values are okay.
>
>> I notice you ask about a lot of digital modes but not CW. My ears have
>> been listening to CW for 30-some years now and I can do a lot of
>> processing in my brain. But what my brain cannot remove is horrible
>> filter ringing. I don't know how those other digital modes stack up...
>> maybe computers are better at removing horrible ringing than my brain.
>
>I believe that in theory if the exact group delay profile is known,
>then
>a digital receiver can perform a certain amount of equalization. What
>I'm curious about is how much varience can be introduced by the
>filters in a receiver for various transmission types without needing
>to equalize.

Excuse my ignorance, but why on earth do you do some crude analog filtering and then continue with digital filtering, in which you have much more alternatives ?

The only reason that I can think about using sharp IF crystal filters is that the dynamic range of the following stages (product detector and ADC) is not sufficient.

In a typical general coverage up converting receiver, the roofing filter will define the bandwidth the ADC must handle. Also some gain control (not necessary automatic) is needed to set the band noise well below one LSB (LF/MF vs VHF/UHF and antenna efficiency on LF).

Even when designing an add-on unit for audio processing, why would anyone use the receiver CW filters apart from dynamic range issues ?

Paul OH3LWR

# 902. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 12:25:52 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <a875379a-2387-4083-bac2-d8956cf66372@m3g2000hsc.googlegroups.com>
Source record: 4939

On Jun 26, 3:32 am, Paul Keinanen <keina...@sci.fi> wrote:
> On Wed, 25 Jun 2008 11:14:03 -0700 (PDT), j...@feith.com wrote:
> >On Jun 25, 9:45 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> >> I have been playing with homebrew crystal filters (following W7ZOI and
> >> Bill Carver/K6OLG) for CW, as well as audio filters, and can tell you
> >> that on CW the difference between a super-sharp-in-frequency
> >> Chesbyshev filter (typical in ham equipment for a long time now) and a
> >> more constant-delay (e.g. Gaussian to 6dB or 12dB, or equiripple
> >> linear phase) filter is like night and day.
>
> >You wouldn't happen to know the group delay variance
> >of the filters you mentioned?  Rough values are okay.
>
> >> I notice you ask about a lot of digital modes but not CW. My ears have
> >> been listening to CW for 30-some years now and I can do a lot of
> >> processing in my brain. But what my brain cannot remove is horrible
> >> filter ringing. I don't know how those other digital modes stack up...
> >> maybe computers are better at removing horrible ringing than my brain.
>
> >I believe that in theory if the exact group delay profile is known,
> >then
> >a digital receiver can perform a certain amount of equalization.  What
> >I'm curious about is how much varience can be introduced by the
> >filters in a receiver for various transmission types without needing
> >to equalize.
>
> Excuse my ignorance, but why on earth do you do some crude analog
> filtering and then continue with digital filtering, in which you have
> much more alternatives ?
>
> The only reason that I can think about using sharp IF crystal filters
> is that the dynamic range of the following stages (product detector
> and ADC) is not sufficient.
>
> In a typical general coverage up converting receiver, the roofing
> filter will define the bandwidth the ADC must handle. Also some gain
> control (not necessary automatic) is needed to set the band noise well
> below one LSB (LF/MF vs VHF/UHF and antenna efficiency on LF).
>
> Even when designing an add-on unit for audio processing, why would
> anyone use the receiver CW filters apart from dynamic range issues ?

I kind-of have the same questions too. For a homebrew project, having
all the software-designed-radio complexity in addition to the tight-

analog-filtering-from-DC-to-daylight complexity seems to just... make everything too complicated and not fun anymore.

But the best ham receivers couple impressive front ends with effectively tight roofing filters with SDR aspects effectively (and quite usably) and I can see why someone would want to try their hands at their own competitive design. But, wow, it's a lot of effort. And a lot of ham receivers - especially the first and second generation designs - combined all these technologies into radios that are actually painfully complicated to use. (When the QST review starts contrasting menu option 73 submode 4 with menu option 105 submode 13, that's a real turn-off to me. At the same time, other younger operators just love that sort of complexity!)

On the other hand, a truly simple analog front end (e.g. Softrock) combined with a computer is a hell of a lot of fun. You spend a lot more time looking at a computer screen and less listening but that's what some like.

Tim N3QE.

# 903. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 15:34:14 UTC
From: john@feith.com
Message-ID: <3a096d3a-cce0-4b95-84f2-bc795c1629ce@x41g2000hsb.googlegroups.com>
Source record: 4940

On Jun 26, 3:32 am, Paul Keinanen <keina...@sci.fi> wrote:
> Excuse my ignorance, but why on earth do you do some crude analog
> filtering and then continue with digital filtering, in which you have
> much more alternatives ?

To undersample the signal it must be bandwidth limited which means
some
type of analog filtering. As long as filtering is necessary, it might
as well be a narrow as the widest signal of interest and as sharp as
possible so long as it's convenient and doesn't distort the signal too
much.

> why would anyone use the receiver CW filters

Probably a bit narrower than what I had in mind … I'm currently
looking
at 500 KHz wide SAW filters.

# 904. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 16:41:11 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <OEP8k.212126$Tj3.62761@en-nntp-02.dc1.easynews.com>
Source record: 4941

<john@feith.com> wrote in message
news:3a096d3a-cce0-4b95-84f2-bc795c1629ce@x41g2000hsb.googlegroups.com...
"As long as filtering is necessary, it might
as well be a narrow as the widest signal of interest and as sharp as
possible so long as it's convenient and doesn't distort the signal too
much."

"As sharp as possible" and "doesn't distort the signal too much" are somewhat conflicting goals: In general, the steeper the skirts of a filter, the more group delay variation you get there at the edges (hence, Butterworth has less group delay variation than Chebyshev which has less than Elliptic). Now, you can certainly account for this by widening the passband a bit and then perhaps using even steeper skirts, or you can compensate for it digitally if you can characterize it, but the main point here is that it does get rather complex -- hence the trend to have somewhat "looser" analog filters (and thus low group delay variation) and then do whatever you want digitally.

# 905. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 18:04:55 UTC
From: john@feith.com
Message-ID: <a998db40-fe2b-4b9a-965c-442c7262b569@i76g2000hsf.googlegroups.com>
Source record: 4942

On Jun 26, 12:41 pm, "Joel Koltner" <zapwireDASHgro...@yahoo.com>
wrote:
> "As sharp as possible" and "doesn't distort the signal too much" are somewhat
> conflicting goals:

Understood, part of the point of this thread which was to get an idea
of how much group delay variance is acceptable for various types of
transmissions without greatly impacting the quality of the received
signal.

> hence the trend to have somewhat "looser" analog filters (and thus low
> group delay variation) and then do whatever you want digitally.

Also understood, it's all about balance. Going narrow impacts group
delay variance which distorts signal, going wide impacts dynamic
range.

Which still leaves me with the notion that you want to go as tight as
reasonably possible and no tighter. With that in mind it sounds like
what we've determined so far with regards to IF filtering is:

transmission type receiver group delay variance
---
CW should be less than 2 ms

this is based on Tim Shoppa's posts which were to the point.
Does anyone else have data to contribute?

-- John
john@feith.com

# 906. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 18:40:04 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <680ae141-48ba-4ece-949b-7fcf706d47cc@56g2000hsm.googlegroups.com>
Source record: 4943

On Jun 26, 11:34 am, j...@feith.com wrote:
> On Jun 26, 3:32 am, Paul Keinanen <keina...@sci.fi> wrote:
> > why would anyone use the receiver CW filters
>
> Probably a bit narrower than what I had in mind …  I'm currently
> looking
> at 500 KHz wide SAW filters.

As a rough guesstimate, the group delay in a 500kHz wide filter will be 1/500,000 secs, or 2.0 microseconds. Now, depending on shoulder steepness the change in group delay might get to 2, 3, maybe even 5 times 2.0 microseconds. But even at 20 microseconds I don't think any of the HF digital modes you mentioned would be impacted.

Most of my comments regarding group delay and ringing in filters were oriented towards narrowish (few kHz or less) filters.

Wow, a HF receiver with a 500kHz SAW filter after the mixer. I don't have a clue what you're doing! I thought we were talking about HF receivers for common bandwidths!

Tim N3QE

# 907. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 19:55:06 UTC
From: john@feith.com
Message-ID: <6f168058-5c26-4bcb-b39c-f011ae46283c@z66g2000hsc.googlegroups.com>
Source record: 4944

On Jun 26, 2:40 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
> But even at 20 microseconds I don't think any of the HF digital modes you
> mentioned would be impacted.

Thanks ... that's the type of information I was curious about.

> Wow, a HF receiver with a 500kHz SAW filter after the mixer. I don't
> have a clue what you're doing!

I'm "playing" with something resembling 0 - 175 Mhz up converted to
208 Mhz
filtered using a GSM SAW filter sampled at the first IF using a 25
Msps 16 bit
ADC. The silly width is because I'm interested in handling broadcast
FM
including RDS (among other things). I'm also interested in receiving
satellite
images which in some cases has a bandwidth of 150 Khz.

-- John
john@feith.com

# 908. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 20:10:45 UTC
From: john@feith.com
Message-ID: <c02397e6-7584-4333-8d76-b82fa8d5b533@e39g2000hsf.googlegroups.com>
Source record: 4945

As another random datapoint there's a
MetOp document regarding the LRPT satellite
transmissions which says:

Frequency range Group delay
(kHz) variation (µs)
[0-40] +/- 2
[40-60] +/- 5

-- John
john@feith.com

## 909. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 20:16:09 UTC
From: john@feith.com
Message-ID: <d9604ea2-58d7-4958-8521-49b84a64bc4d@k37g2000hsf.googlegroups.com>
Source record: 4946

[Let's try this again ... that should be microseconds (us) not (is)]

As another random datapoint there's a
MetOp document regarding the LRPT satellite
transmissions which says:

| Frequency range (kHz) | Group delay variation (us) |
|---|---|
| [0-40] | +/- 2 |
| [40-60] | +/- 5 |

-- John
j...@feith.com

## 910. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 20:53:47 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <xlT8k.148177$Uf4.2008@en-nntp-08.dc1.easynews.com>
Source record: 4947

<john@feith.com> wrote in message
news:a998db40-fe2b-4b9a-965c-442c7262b569@i76g2000hsf.googlegroups.com...
"Does anyone else have data to contribute?"

I don't, and I suspect that no one has done a comphrehensive survey of various popular (to hams) modulation formats and their sensitivity to group delay variations. Doing so would definitely be valuable -- it'd be a shoe-in for a QST or QEX article.

## 911. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-26 21:45:26 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <4daba4e1-a3a3-4db1-8137-930e1d37efa0@v1g2000pra.googlegroups.com>
Source record: 4948

On Jun 25, 6:45 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> On Jun 24, 11:46 pm, j...@feith.com wrote:
>
>
>
> > For various transmission types, how much group delay variation can be
> > tolerated in
> > the receiver before it causes problems recovering the original
> > signal? I realize that it
> > all depends ... I'm just interested in getting a rough idea.
>
> > For example, at what point is:
>
> > 1) SSB voice reception noticeably affected?
>
> > 2) the ability to receive images from weather satellites affected?
>
> > 3) various amateur radio modes such as PSK31, RTTY, and MFSK16
> > affected?
>
> > 4) HD Radio specs 600 ns as the max for the transmitter, what's the
> > max for the receiver?
>
> > I'm curious since the group delay variation of SAW filters available
> > for IF filtering seems
> > to vary widely.
>
> I have been playing with homebrew crystal filters (following W7ZOI and
> Bill Carver/K6OLG) for CW, as well as audio filters, and can tell you
> that on CW the difference between a super-sharp-in-frequency
> Chesbyshev filter (typical in ham equipment for a long time now) and a
> more constant-delay (e.g. Gaussian to 6dB or 12dB, or equiripple
> linear phase) filter is like night and day.
>
> My impressions are done "to my ears", not to a spectrum analyzer.
>
> The super sharp in frequency Chesbyshev filters have horrible horrible
> ringing especially on say 40M or 80M in the summer with the QRN. I can
> hardly listen for a few minutes without getting disgusted. BUT... they
> do have a real advantage during say a contest when there's competing
> signals every few hundred Hz.
>
> At the other extreme the constant-delay filters sound remarkably clear
> and transparent. They do not have such a sharp stopband, but my ear

> makes up for that most of the time. Ringing from summertime band noise
> is not nearly so tiring.
>
> Most of the filter simulation programs (AADE, SPICE, NatSemi's cool
> new WebBench filter tools, etc.) let you look at not just frequency
> response but also phase response and (maybe most importantly for
> summertime QRN) impulse response. Having run the simulations and
> listened with my ears to my experiments this summer, I cannot
> emphasize how much more enjoyable it is to use a Gaussian-to-6dB or
> equiripple linear phase filter in CW.
>
> Often when the bands are not crowded but there is QRN, I far far
> prefer a simple two-pole crystal filter designed for CW in the first
> place (e.g. my Heath HW-16) to any fancy-pants 8-pole or 12-pole
> modern filters in my new rigs.
>
> I notice you ask about a lot of digital modes but not CW. My ears have
> been listening to CW for 30-some years now and I can do a lot of
> processing in my brain. But what my brain cannot remove is horrible
> filter ringing. I don't know how those other digital modes stack up...
> maybe computers are better at removing horrible ringing than my brain.
>
> I don't think I have a "golden ear" or any other audiophile quality.
> In fact I'm pretty sure my ears are less good than they were when I
> was a kid doing CW.
>
> Tim N3QE

Obviously, both the time and the frequency response are determined by the positions of the poles and zeros of a linear system (filter), but be a bit careful about equating group delay and ringing. It's easy to make an FIR digital filter that has constant group delay, but rings quite nicely.

I suspect the people who design RF communications systems using modern modulation schemes know the answers to John's questions. There's probably another newsgroup where you'd get more answers. Or--run some simulations. I can imagine creating ideal signals in Scilab (or Matlab) and feeding them through various filters, and then demodulating them. It shouldn't be terribly difficult to do that, but I'm not volunteering.

Cheers,
Tom

## 912. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-27 21:16:28 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <d1c23d94-d6c8-4796-9df1-5cdecca96381@w8g2000prd.googlegroups.com>
Source record: 4949

K7ITM wrote on Thurs, Jun 26 2008 2:45 pm

>On Jun 25, 6:45 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
>> On Jun 24, 11:46 pm, j...@feith.com wrote:
>
>> I don't think I have a "golden ear" or any other audiophile quality.
>> In fact I'm pretty sure my ears are less good than they were when I
>> was a kid doing CW.
>>
>> Tim N3QE
>
>Obviously, both the time and the frequency response are determined by
>the positions of the poles and zeros of a linear system (filter), but
>be a bit careful about equating group delay and ringing. It's easy to
>make an FIR digital filter that has constant group delay, but rings
>quite nicely.

'Ringing' and group-delay over a passband are separate things but, in practice they are are related. In passive-component filters they are quite related.

'Ringing' phenomena can be investigated analytically in any time-domain circuit analysis program. I use LTSpice from National Semi-conductor...totally free for download and works on any PC. SPICE compatible, the source stimulus can be set as a pulse of several cycles with the rise-time, fall-time adjustable. If there is electronic-cause ringing, it will show up at the output.

Every single passive-component filter has time delay. If the time delay is unequal across the passband, then one will hear the ringing. Such ringing isn't always a physical-electronic thing IN the filter but more in the way the human brain perceives sound. True high-fidelity electronic music systems will have near-equal time delay over its entire passband. Unfortunately, few, if any, of the first Hi-Fi systems makers ever published specifications on group-delay or delay of any kind. [excluding speakers, of course, since those and their interrelationship with a room are so acoustically variable that no common standard could be reasonably adopted]

It is very hard to describe sound that is FELT rather than measured by instruments. As Tim said about CW use, ringing causes an actual discomfort. With wideband home music systems there is very little perceived 'ringing' but there exists 'quality' which can only be graded by comparison with another system as 'A-B' testing. The one that FEELS like it sounds best would be the winner.

For non-audio use, such as in AM-PM ('QAM') modulation combinations
in modems, inter-symbol distortion with/without an 'eye' display
can grade things...and group-delay effects aren't the only things
to blame there, lots of others in the total path.

Simpler FSK systems such as single-channel teleprinter need
concentrate on group-delay only over a passband about twice the
frequency of its frequency shift between Mark and Space. Group-
delay there shows up more on demodulated pulse edge ditortion.
Ringing there can be seen easily at the edge transitions. A
compromise there is to have group-delay greater beyond the
needed passband limits resulting in rounded transitions;
demodulator output can be shaped afterwards as desired.

NTSC analog video examples do not really apply since the common
ACTUAL bandwidth of most smaller TV sets was so limited (down to
1 MHz in some) that group-delay effects are hidden in the
resulting video passband distortion of details on objects.

Broadcast FM is hard to define in felt-quality since FM's
'quiet' spectrum use is relatively narrow. 'Loud' passages of
music uses more spectrum space, thus group-delay effects over
a passband are more pronounced on loud passages.

>... I can imagine creating ideal signals in Scilab (or
>Matlab) and feeding them through various filters, and then
>demodulating them. It shouldn't be terribly difficult to do that, but
>I'm not volunteering.

Machine-in, machine-out systems such as teleprinters and
modems can be compared relatively easily with computer
analysis programs. Regardless of the computer program,
none can substitute for what is FELT in the ear-brain
sensory system with acoustic input. I see a valid test as
only A-B or A-B-C (or more) comparisons using the same
audio or audio-modulation input. That is a LOT more work.
Most of what I've done in that delay subject are locked into
lab notebooks in corporate ownership and it involves many
man-weeks of investigation. The best one can hope for,
in my estimation, are general guides on limits from the
many and varied radio services.

73, Len AF6AY

## 913. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-27 21:24:35 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <460d5ac9-622b-4777-ac26-35a2ec66e9ea@w5g2000prd.googlegroups.com>
Source record: 4950

It just occurred to me that many don't know what "group-delay"
is. It is physically-electronically a time delay from input to output
that may vary depending on the input frequency versus the
magnitude-phase response of the filter within its passband.

Group-delay is defined as the difference in phase delay versus
frequency difference over very small differences in frequency.
Most analysis programs show that as a matter-of-course using
frequency-domain analyses. Using around 50 or more different
frequencies of a linear source sweep input will show the actual
filter time-delay, input to output, that is very close to the real
thing.

73, Len AF6AY

## 914. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-28 01:13:20 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0806272033070.18487@panix1.panix.com>
Source record: 4851

On Thu, 26 Jun 2008, Michael Black wrote:

> On Wed, 25 Jun 2008, A wrote:
>
>>
>>
>> On Tue, 24 Jun 2008, Allodoxaphobia wrote:
>>
>>> On Tue, 24 Jun 2008 16:39:43 -0400, A wrote:
>>>>
>>>> Did any of you guys look at http://groups.google.com to see if what you
>>>> want is there? There are lots of ways to connect to NG servers that are
>>>> outside of your network (unless they disable nntp protocols).
>>>
>>> Ya, but... Post from Google and a Great Portion of the usenet
>>> population will never see your postings:
>>
>> I have access to three non-Google ISPs and in recent months, the posts have
>> been getting out to all of them just as fast as I can log onto them by
>> telnet and check for myself. They have improved over, say, a year ago.
>>
> You miss the point, though I'm tired of seeing all this off-topic discussion
> in every newsgroup as the clueless post about it rather
> than know what's happening and finding the right place to post.

Lets look at all of the original post that I responded to while you
deleted what the issue was about. Here it is:
**********
From arthures@panix.com Tue Jun 24 16:39:43 2008

Did any of you guys look at http://groups.google.com to see if what you want
is there? There are lots of ways to connect to NG servers that are outside
of your network (unless they disable nntp protocols).

On Sat, 21 Jun 2008, Highland Ham wrote:

> ken scharf wrote:
> > Right now I am using AT&T (bellsouth) DSL. If they drop the news groups
> > and Comcast doesn't, I think bellsouth will lose both my phone and
> > internet business. It's nice to have TWO providers of the same service
> > competing with each other!
> ====================================
> Agreed, this is rather OT ,but if you have a (A)DSL connection with a
> provider in the USA , do you have to 'sit out' a say 12 months contract
> before you can switch or can you switch at any time ?
>

> Frank GM0CSZ / KN6WH
>
******************************

> He's saying that many will filter out posts from google.

As a guy who is presenting himself as: i) non-clueless, ii) complaining
about OT posts and everyone else who is clueless, I think your own
knowledge leaves much to be desired, and iii) your habit of deleting
relevant other material from another poster has the effect of quoting
out of context. You also deleted this part that I authored:

*****************
From arthures@panix.com Wed Jun 25 23:57:59 2008

Whether your post gets "out" far onto the net depends at least to some
degree on where on the net your ISP is located and what kind of traffic
flows there. I've had experience with about a dozen UNIX shell account ISPs
over the last 15 years and in the past there were quite a few that did _not_
have good connectivity with other ISPs through the nntp protocol. I'm not
overly happy with Google for NG access, but if anyone is unhappy with their
own ISP's NG server (they can subscribe or block whatever NGs they feel
like) then certainly they should try Google. And, you can even use Google
(and other "portals") to find other NG accesses.

**************************

Too much
> spam, but too much cluelessness. People posting from google without
> any awareness of where they are. People posting from google without
> quoting what they are replying to. People posting from google and
> being clueless about how others see the newsgroup,

As I tried to explain, nntp is not like email. A post goes out in all
directions to neighbor ISPs. It is supposed to be relayed to the next
nodes, and re-relayed from their. Many years ago I could watch a post
start from a point of origination and start appearing at farther out ISPs
sometimes hours later. If the local ISP does not _subscribe_ to that
newsgroup, then you won't get any posts. If posts don't appear within
some upper limit in time, then those posts will never appear period. I am
not aware that any ISPs sellectively reject a few or all nntp posts from
any source, but many will reject emails based on domains of origin because
of spam. ISPs out on remote branches of their network connectivity are the
ones that have the poorest "capture" ability and one of my ISPs had such
a poor connectivity until they upgraded.

so they think
> doing things like replying to spam with an empty message but a different
> subject header will "fix things";

ISPs can handle thread content based on the subject line or the reference
in the header to the original post that the author is responding to.

the rest of the world sees an empty
> message that requires effort to figure out what the post is about since
> we don't see it all on one webpage.

This is your best comment. However, certain newsreaders will group response posts, whether it included some text from the prior post or not, in its proper place in the thread subject (eg. Free Agent). PINE (a Unix newsreader) does not keep response posts in a thread so changing the subject has no effect. Google puts the response post in the same thread and _sometimes) mentions that the subject was changed that the original post was made under. Also, what you see with Google depends on what kind of web browser you use.

However, there are a lot of people who don't follow the courtesy of quoting what they are responding to. Usually these people don't have anything important or significant to say, anyway.

Google has made it too easy
> for people to post to Usenet, so they can post without giving any
> thought to what already exists.

Such as the relevant material I wrote that you deleted. For a free service, Google does a lot for people. The problem is that people are either not knowing what they are doing or refuse to use good operating practices when trying to carry on dialog. My observation that most conversations are neither informative or cooperative seems to indicate a fairly widespread deficiency in human intelligence.

> They too often think a newsgroup
> is a hangout,

This is a description of the reality about newsgroups rather than any error on the part of NG posters and lurkers. NGs really are hangouts, just like bars.

> where anything goes

This is also a description of reality (unless you want to belong to a moderated NG or a website chatroom where you can get censored by the owner/manager, and be exposed to advertising, malicious code being downloaded on your box, and your logins going into a database).

so long as everyone shares the
> common interest of the newsgroup.

There is very little "common interest". Spamers come to spam. Bloggers come to harvest people off NGs to go to their blog. Everyone else has their own agenda. I know what some of the agendas are and skip over those and go to the next ones.

SO rather than find a newsgroup
> where a post is on-topic, they post where their "buddies" are.

And, I think this is just fine. If a guy doesn't like some post, he can't say anyone forced him to read it. Ultimate freedom of speech.

> With each little bit, the newsgroups degrade just a little bit more.

Trouble is, there are also a lot of guys out there who are self-appointed judges of what is on-topic or off-topic, what is right and wrong, and they constantly bitch about everyone else while they play the roll of NG-cop and say everyone but themselves is doing it all wrong.

> Drive out the ones who know what they are doing, and then the clueless
> can do whatever they like.

You can also start your own group or mailing list, and invite all of the people that you find acceptable and play the game called "snob," too.

> Michael VE2BVW
>
>

## 915. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-28 05:25:58 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <2381ef04-79bf-4a73-85f3-5783ec3556f7@i18g2000prn.googlegroups.com>
Source record: 4852

On Jun 27, 2:16 pm, AF6AY <LenAnder...@ieee.org> wrote:
...
> I use LTSpice from National Semi-
> conductor...

My friends at Linear Technology will be most interested to hear that,
Len.

# 916. Re: Group Delay Variation - How much is too much?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-28 15:02:02 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <9a76c6f2-b4f3-4c0b-a9b3-7e0d8fa880c9@w8g2000prd.googlegroups.com>
Source record: 4853

On Jun 27, 10:25 pm, K7ITM <k7...@msn.com> wrote:
> On Jun 27, 2:16 pm, AF6AY <LenAnder...@ieee.org> wrote:
> ...
> > I use LTSpice from National Semi-
> > conductor...
>
> My friends at Linear Technology will be most interested to hear that,
> Len.

OOOPS! My bad! :-)

Yes, LINEAR TECHNOLOGY CORPORATION did LTSpice...an improvement over their previous SPICE derivative done to promote their switcher ICs.

Apologies all around to Linear Technology friends. They make fine ICs.

I also have, but have not tried TINA from Texas Instruments, another SPICE
derivative. Not enough time here to try everything out that is available. TINA
is also free for download but it is harder to get through their web pages to do so.
I don't have any friends at TI or Linear or at National Semi, I just use their good products...just like I am currently using a couple of LM337s using National's
appnote information in a slightly different way.

73, Len AF6AY

## 917. Re: teflon wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-28 19:27:46 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <2hw9k.9184$rH1.5640@newsfe20.lga>
Source record: 4854

"Gary" <gbelcas@comcast.net> wrote in message > Gary

Shipped several pieces, different colors. Hope the gauge is
close enough for your needs.

Pete

## 918. CD4046 and or 74HC4048

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-28 20:05:32 UTC
From: "Leland C. Scott" <kc8ldo@arrl.net>
Message-ID: <edKdnQmssszKBPvVnZ2dnUVZ_sjinZ2d@comcast.com>
Source record: 4855

Anybody have a MathCAD, Excel, Scilab or Octave worksheet for designing with the CD4046 or 74HC4046 PLL chips? I'm looking for something that allows one to input desired VCO frequency, offset or center frequency and loop frequency with bandwidth. The worksheet should generate the required component values. I can do this by hand but I have a lot of test cases I want to investigate so doing the calculations by hand is a bit time consuming. I don't want to spend a week doing a worksheet up from scratch if somebody has one they are willing to share.

--
Regards,
Leland C. Scott
KC8LDO

http://www.gnu.org/software/octave/

http://www.scilab.org/platform/

http://www.sagemath.org/

# 919. Re: CD4046 and or 74HC4048

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-29 00:03:16 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <i6Wdnb4HiNbbTPvVnZ2dnUVZ_jednZ2d@comcast.com>
Source record: 4856

"Leland C. Scott" <kc8ldo@arrl.net> wrote in message
news:edKdnQmssszKBPvVnZ2dnUVZ_sjinZ2d@comcast.com...
> Anybody have a MathCAD, Excel, Scilab or Octave worksheet for designing with
> the CD4046 or 74HC4046 PLL chips? I'm looking for something that allows one to
> input desired VCO frequency, offset or center frequency and loop frequency
> with bandwidth. The worksheet should generate the required component values. I
> can do this by hand but I have a lot of test cases I want to investigate so
> doing the calculations by hand is a bit time consuming. I don't want to spend
> a week doing a worksheet up from scratch if somebody has one they are willing
> to share.
>
>
> --
> Regards,
> Leland C. Scott
> KC8LDO
>

Some links to PLL design software:

This one is a spreadsheet application:
http://www.keystoneradio.com/?n=Main.PLLDesign
Download the last version of the spreadsheet to get all the improvements.

This one is a web-based JAVA application:
http://webench.national.com/appinfo/wireless/webench/index.cgi

An old DOS program, but seems to be pretty good
http://w1.859.telia.com/~u85930032/pll.zip

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the
address)

Experience: What you get when you don't get what you want

## 920. Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-29 16:32:47 UTC
From: jimmie68@gmail.com
Message-ID: <a82be280-9eb8-40c2-8b87-2f0c7a4de0ee@z32g2000prh.googlegroups.com>
Source record: 4857

I have a 12volt home made power supply similar to Astron models. I was told it could handle 30A. The pass transistors are missing and I have some 50 amp NPN darlington transistors on hand I was considering using for replacements. Can you think of any reason these could/should not be used.

Jimmie

## 921. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-29 17:42:01 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <Tb6dnW3d9J3DVPrVnZ2dnUVZ_gadnZ2d@web-ster.com>
Source record: 4858

jimmie68@gmail.com wrote:
> I have a 12volt home made power supply similar to Astron models. I was
> told it could handle 30A. The pass transistors are missing and I have
> some 50 amp NPN darlington transistors on hand I was considering using
> for replacements. Can you think of any reason these could/should not
> be used.
>
> Jimmie

Tons, but all of them start with 'maybe'.

The biggest one is 'maybe your power supply was designed for straight transistors' -- if it seems to have hefty current drive to the pass transistor bases, then that would be the case.

Otherwise, go ahead and put in your pass transistors and see what happens.

Keep in mind that those pass transistors may be missing for a reason, and the reason may be that the power supply never worked well in the first place -- so if what you have doesn't work, it may be the design or execution of your circuit, not the transistors themselves.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 922. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 05:04:50 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <udpg64dfkg2t9v5nhpuguu1bb8vavu4tv7@4ax.com>
Source record: 4859

On Sun, 29 Jun 2008 09:32:47 -0700 (PDT), jimmie68@gmail.com wrote:

>I have a 12volt home made power supply similar to Astron models. I was
>told it could handle 30A. The pass transistors are missing and I have
>some 50 amp NPN darlington transistors on hand I was considering using
>for replacements. Can you think of any reason these could/should not
>be used.

Some of the Astron power supplies had a separate (higher voltage)
power supply for the control and driver stages and the input-output
voltage difference could be as low as Vce(sat) i.e. below 1 V, thus
the power dissipation could be minimized.

However with a darlington, the minimum voltage drop would be Vce(sat)
for the driver transistor and Vbe for the big transistor, thus
requiring a higher transformer secondary voltage and hence suffer a
large dissipation in the series pass transistors.

Note also that even if the darlington could handle 50 A, the power
dissipation for TO-3 packages are typically in the 100-150 W range so
a single transistor could tolerate only 3-5 V voltage drop at 30 A.
However, those power dissipation figures apply for 25 C case
temperature, so in practice, this could be achieved only if the
transistor and the heat sing is submerged into running cold tap
water:-).

So in practice, you would have to use several darlingtons in parallel
with large heat sinks and also use larger emitter resistors to balance
out the gain differences between darlingtons. This may require a
slightly higher transformer secondary voltage.

Paul OH3LWR

## 923. source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 11:50:20 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <4868c876$1@clear.net.nz>
Source record: 4860

Good day all!
I have an old Kenwood TS-820 that I've already upgraded somewhat, but I would like to try adding the WARC bands at 10,18 and 24 MHz.
The rig only cost me $50 so I was horrified when I discovered that crystals for the job are now priced @ $65 US each + shipping!!!
The frequencies aren't very unusual so obviously I am looking for someone who has them available for a more reasonable rate.
As it stands it just isn't worth the cost of over $250 NZ.
The Xtals are on 15.5 23.5 and 30 MHz and are standard miniature types.
If any one can help me out please drop me an Email and let me know how I can pay for them.
73's
Cliff Wright ZL1BDA ex G3NIA

# 924. Re: source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 13:58:33 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <5cf107cf-d870-48c0-9145-5029d2528e76@l42g2000hsc.googlegroups.com>
Source record: 4861

On Jun 30, 7:50 am, cliff wright <c.c.wri...@paradise.net.nz> wrote:
> Good day all!
> I have an old Kenwood TS-820 that I've already upgraded somewhat, but I
> would like to try adding the WARC bands at 10,18 and 24 MHz.
> The rig only cost me $50 so I was horrified when I discovered that
> crystals for the job are now priced @ $65 US each + shipping!!!
> The frequencies aren't very unusual so obviously I am looking for
> someone who has them available for a more reasonable rate.
> As it stands it just isn't worth the cost of over $250 NZ.
> The Xtals are on 15.5 23.5 and 30 MHz and are standard miniature types.
> If any one can help me out please drop me an Email and let me know how I
> can pay for them.
> 73's
> Cliff Wright ZL1BDA ex G3NIA

Cliff -
You will note that many homebrewers prefer to use widely available "microprocessor crystals" for all crystals. Typical prices are $0.50-$2.00 new, and they are widely available from lots of distributors (in the US: Mouser, Digikey, etc.)

30 MHz is a widely available microprocessor crystal available in many holders.

The other two frequencies you want are not microprocessor crystals, but nearby frequencies are available, and if you don't mind the dial reading strangely will work fine. If you've added an outboard counter, some are smart enough to do the math between the VFO and the hetrodyne crystals and it will automagically read correctly. (Small plug: look around and you'll find such smart dials for as little as $10.00).

23.512 MHz is widely available (I think it can be divided down to be a baud rate generator which is why it's a "microprocessor crystal".)

15.36 MHz is also widely available.

While the microprocessor crystals are not the most pristine high-Q crystals available with matching-Kenwood parameters, they will work just fine for hetrodyne oscillators.

Tim N3QE

# 925. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 14:12:05 UTC
From: AndyS <andysharpe@juno.com>
Message-ID: <b62a571d-ec26-4403-ae7f-1dbeb87fcdb3@56g2000hsm.googlegroups.com>
Source record: 4862

Andy writes:

Look in the tech manual for a spectrum analyzer that covers a few
Khz to 1.3 Ghz and you will see exactly how it's done.

Typically, the LO runs above 1.3 Ghz and all signals are converted
UP to a high IF where the first filter is a wideband SAW. A SAW can
have several Mhz bandwidth way up there.

Then the signal is downconverted to an IF that is compatible with
the SAW bandwidth to achieve image rejection. The IF filter here
is usually something like a crystal or ceramic filter, unless the
requirements
for instantaneous bandwidth forces a better group delay response.

The hardest part is keeping the signal linear ( intermod,
crossmod)
in the presence of multiple simultaneous signals until the SAW and
next IF filters are reached.

Lots of tradeoffs have to be made.

These tradeoffs have already been made in spectrum analyzers, so
if you get a few different block diagrams of different units, you
will
see what specific frequency plans the designers have decided to use.

The frequency plan of the cheapest spectrum analyzer would
probably fit your purpose....

Coming up with a good frequency plan in view of the nonlinearities
of the mixers used and the bandpass characteristics of the filters
one employs is a real challenge sometimes.

Andy in Eureka, Texas

# 926. Re: source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 15:19:56 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <Y_idnYFbb7ASZPXVnZ2dnUVZ_qTinZ2d@web-ster.com>
Source record: 4863

cliff wright wrote:
> Good day all!
> I have an old Kenwood TS-820 that I've already upgraded somewhat, but I
> would like to try adding the WARC bands at 10,18 and 24 MHz.
> The rig only cost me $50 so I was horrified when I discovered that
> crystals for the job are now priced @ $65 US each + shipping!!!
> The frequencies aren't very unusual so obviously I am looking for
> someone who has them available for a more reasonable rate.
> As it stands it just isn't worth the cost of over $250 NZ.
> The Xtals are on 15.5 23.5 and 30 MHz and are standard miniature types.
> If any one can help me out please drop me an Email and let me know how I
> can pay for them.
> 73's
> Cliff Wright ZL1BDA ex G3NIA
>
JAN Crystals in the US will make these up for you, as will International
Crystal Manufacturing. They're both on the web.

Dunno what difficulties you'll have getting them into New Zealand.

You may want to check to see if there are any crystal manufacturers in
other countries that may have what you need at less cost -- I'm really
only familiar with these two.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 927. Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 17:12:49 UTC
From: numeric <numeric@att.net>
Message-ID: <lu8ak.84773$102.1248@bgtnsc05-news.ops.worldnet.att.net>
Source record: 4864

Hi,

I would like to build a PCB board with fine pitch (LQFP32) and very small surface mount parts (1206 and smaller) parts. The board is a simple 24 bit A/D and D/A converter with a full speed (12 Mbs) USB2 interface; although I would prefer the USB2 high speed interface (480 Mbs). The temptation is too hard to resist using today's microprocessors such as SiLabs C8051F350 (basically an 8051 cpu). I know that a commercial 4 layer PCB with a solder mask would probably work for homebrew construction; but the board cost is high.

So what is the chance of a double sided PCB without solder mask working with very small parts? The process I would use in either case would be:

1. Place solder paste on all pads. Typically, when heated the solder will vacate between pins and will suck up, like a magnet, under the SMD pin.

2. Place glue under parts that will possible move when the board is handled.

3. Heat the PCB in a toaster oven until soldered. Manually follow the heat up and cool down time curves for type of solder paste used.

Comments/suggestions are appreciated.

# 928. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 17:56:24 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <8fd5be5c-7d6c-43ee-8afa-fbff3a953e37@y38g2000hsy.googlegroups.com>
Source record: 4865

On Jun 30, 1:12 pm, "numeric" <nume...@att.net> wrote:
> Hi,
>
> I would like to build a PCB board with fine pitch (LQFP32) and very small
> surface mount parts (1206 and smaller) parts. The board is a simple 24 bit
> A/D and D/A converter with a full speed (12 Mbs) USB2 interface; although I
> would prefer the USB2 high speed interface (480 Mbs). The temptation is too
> hard to resist using today's microprocessors such as SiLabs C8051F350
> (basically an 8051 cpu). I know that a commercial 4 layer PCB with a solder
> mask would probably work for homebrew construction; but the board cost is
> high.
>
> So what is the chance of a double sided PCB without solder mask working with
> very small parts? The process I would use in either case would be:
>
> 1. Place solder paste on all pads. Typically, when heated the solder will
> vacate between pins and will suck up, like a magnet, under the SMD pin.
>
> 2. Place glue under parts that will possible move when the board is handled.
>
> 3. Heat the PCB in a toaster oven until soldered. Manually follow the heat
> up and cool down time curves for type of solder paste used.
>
> Comments/suggestions are appreciated.

LQFP32 is not ridiculously fine pitch (I do 0.65mm pitch parts by hand
all the time), and 1206 is just enormous in the SMT world.

I do both by hand all the time - just a Weller WTCPT with 0.015"
solder. No solder mask for me (I use ExpressPCB cheapo boards) but
pretinning does help. Sometimes flux comes in handy but is not really
necessary. Just lay the solder down across the leads, melt on with the
soldering iron, go back and clean up any blobs with solder-wick.

Toaster oven is great for BGA's but if there's only a few leaded SMT
parts it seems like way overkill.

Tim N3QE

# 929. Re: source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 19:15:39 UTC
From: Steve H <steveqqqqqqqqqwwwwwwwwwweeeeeeeeeerrrrrrrrrrrrttttttttttttyyyyyyyyyyyyyyyyyaaaaaaaaaaaassssssssssssssssddddddddddddddddddfffffffffffffgggggggggghhhhhhhhhhhhhhhhhh@tfif.co.uk>
Message-ID: <g4bbcr$c4t$1@news.albasani.net>
Source record: 4866

cliff wright wrote:
> Good day all!
> I have an old Kenwood TS-820 that I've already upgraded somewhat, but I
> would like to try adding the WARC bands at 10,18 and 24 MHz.
> The rig only cost me $50 so I was horrified when I discovered that
> crystals for the job are now priced @ $65 US each + shipping!!!
> The frequencies aren't very unusual so obviously I am looking for
> someone who has them available for a more reasonable rate.
> As it stands it just isn't worth the cost of over $250 NZ.
> The Xtals are on 15.5 23.5 and 30 MHz and are standard miniature types.
> If any one can help me out please drop me an Email and let me know how I
> can pay for them.
> 73's
> Cliff Wright ZL1BDA ex G3NIA
>

Try http://www.quartslab.com/ , they are happy to supply radio amateurs
and can provide any frequency to order for a fair price. (less than $20.00)

Steve H

## 930. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 19:50:44 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <rOaak.174764$Uf4.93424@en-nntp-08.dc1.easynews.com>
Source record: 4867

Thanks Andy, that was most helpful.

---Joel

## 931. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 19:59:11 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <43fc4314-4163-45d1-a7f2-bf630c11c86e@y38g2000hsy.googlegroups.com>
Source record: 4868

On 30 Jun, 18:12, "numeric" <nume...@att.net> wrote:
> Hi,
>
> I would like to build a PCB board with fine pitch (LQFP32) and very small
> surface mount parts (1206 and smaller) parts. The board is a simple 24 bit
> A/D and D/A converter with a full speed (12 Mbs) USB2 interface; although I
> would prefer the USB2 high speed interface (480 Mbs). The temptation is too
> hard to resist using today's microprocessors such as SiLabs C8051F350
> (basically an 8051 cpu). I know that a commercial 4 layer PCB with a solder
> mask would probably work for homebrew construction; but the board cost is
> high.
>
> So what is the chance of a double sided PCB without solder mask working with
> very small parts? The process I would use in either case would be:
>
> 1. Place solder paste on all pads. Typically, when heated the solder will
> vacate between pins and will suck up, like a magnet, under the SMD pin.
>
> 2. Place glue under parts that will possible move when the board is handled.
>
> 3. Heat the PCB in a toaster oven until soldered. Manually follow the heat
> up and cool down time curves for type of solder paste used.
>
> Comments/suggestions are appreciated.

I don't have any problems making PCBs at home for 0.5 mm lead spacing
QFPs, or soldering them. by hand (drag soldering).

Leon

## 932. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 20:33:06 UTC
From: numeric <numeric@att.net>
Message-ID: <6qbak.85157$102.20465@bgtnsc05-news.ops.worldnet.att.net>
Source record: 4869

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:8fd5be5c-7d6c-43ee-8afa-fbff3a953e37@y38g2000hsy.googlegroups.com...

LQFP32 is not ridiculously fine pitch (I do 0.65mm pitch parts by hand
all the time), and 1206 is just enormous in the SMT world.

I do both by hand all the time - just a Weller WTCPT with 0.015"
solder. No solder mask for me (I use ExpressPCB cheapo boards) but
pretinning does help. Sometimes flux comes in handy but is not really
necessary. Just lay the solder down across the leads, melt on with the
soldering iron, go back and clean up any blobs with solder-wick.

Toaster oven is great for BGA's but if there's only a few leaded SMT
parts it seems like way overkill.

Tim N3QE

Thanks for the reply.

You are correct, a 1206 is a large SMD component and I will try to use them
wherever possible. However, smaller (0402 and larger) may also be used. It
is encouraging to hear about successful fine pitch results with hand solder
techniques. In addition, it will certainly be useful for parts placed on
both sides of the PCB.

## 933. Hams take note: qth.net/qsl.net: is it just me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 20:40:39 UTC
From: Mike Andrews <mikea@mikea.ath.cx>
Message-ID: <g4bgc7$82i$1@puck.litech.org>
Source record: 4870

Is anyone else having trouble seeing, or getting mail to, any of the
lists based at qsl.net or qth.net? They appear to have fallen off the
edge of the 'Net, and DNS for both domains is failing right now for me.

Thanks & 73, de

--
Mike Andrews, W5EGO
mikea@mikea.ath.cx
Tired old sysadmin

## 934. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 20:45:09 UTC
From: numeric <numeric@att.net>
Message-ID: <pBbak.167256$SV4.153009@bgtnsc04-news.ops.worldnet.att.net>
Source record: 4871

"Leon" <leon355@btinternet.com> wrote in message
news:43fc4314-4163-45d1-a7f2-bf630c11c86e@y38g2000hsy.googlegroups.com...
> I don't have any problems making PCBs at home for 0.5 mm lead spacing
> QFPs, or soldering them. by hand (drag soldering).
>
> Leon

Thanks for the reply. I have though about using a laser printer to print a negative image on clear Mylar. Then expose a photo sensitive PCB to the negative image. The laser printer does print very sharp lines as visible using a 10X loop. The quality should be good enough for fine pitch. The etching process however may end up in disaster with fine pitch lines. How do you make the PCB?

## 935. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 20:59:30 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <8f3340f4-327c-4992-a85c-0badb6c16ad1@p25g2000hsf.googlegroups.com>
Source record: 4872

On Jun 30, 4:33 pm, "numeric" <nume...@att.net> wrote:
> You are correct, a 1206 is a large SMD component and I will try to use them
> wherever possible. However, smaller (0402 and larger) may also be used. It
> is encouraging to hear about successful fine pitch results with hand solder
> techniques. In addition, it will certainly be useful for parts placed on
> both sides of the PCB.

For my purposes, 0603 is the "standard" size SMD part to use when I have a choice. Of course power parts are gonna be bigger.

I mean, just so you don't scare yourself, look at the bottom of a TO-92 transistor that you've been soldering for 30 years or more. The pitch there 0.05 inches or 0.127 mm. And you do those all the time. Your LQFP is finer pitch, but not ridiculously so. So don't set yourself up with the mental attitude that it's gonna be hard, because it isn't going to be hard!

I have occasionally used 0402 and even 0201 parts when they weren't available in 0603... I struggled with 0201, and 0402 required a lot of concentration. By comparison the 0.65mm pitch parts were a piece of cake.

And finally, don't ignore the option of doing "dead bug" with SMT parts. Very fun for low-lead-count analog parts... and possible though questionable for digital stuff with lotsa leads.

Tim.

## 936. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 21:23:55 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <06db7ee6-3902-49de-b194-dd5e1e5a5eba@59g2000hsb.googlegroups.com>
Source record: 4873

On 30 Jun, 21:45, "numeric" <nume...@att.net> wrote:
> "Leon" <leon...@btinternet.com> wrote in message
>
> news:43fc4314-4163-45d1-a7f2-bf630c11c86e@y38g2000hsy.googlegroups.com...
>
> > I don't have any problems making PCBs at home for 0.5 mm lead spacing
> > QFPs, or soldering them. by hand (drag soldering).
>
> > Leon
>
> Thanks for the reply. I have though about using a laser printer to print a
> negative image on clear Mylar. Then expose a photo sensitive PCB to the
> negative image. The laser printer does print very sharp lines as visible
> using a 10X loop. The quality should be good enough for fine pitch. The
> etching process however may end up in disaster with fine pitch lines.
> How do you make the PCB?

I use an inkjet printer and JetStar Premium film for the positive
artwork. UV exposure on Fotoboard 2 with pre-coated resist and etching
in ferric chloride.

Leon

# 937. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-06-30 23:30:26 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <ae8aeb66-0018-449f-91be-142c088b2037@u6g2000prc.googlegroups.com>
Source record: 4874

On Jun 30, 10:12 am, "numeric" <nume...@att.net> wrote:
> Hi,
>
> I would like to build a PCB board with fine pitch (LQFP32) and very small
> surface mount parts (1206 and smaller) parts. The board is a simple 24 bit
> A/D and D/A converter with a full speed (12 Mbs) USB2 interface; although I
> would prefer the USB2 high speed interface (480 Mbs). The temptation is too
> hard to resist using today's microprocessors such as SiLabs C8051F350
> (basically an 8051 cpu). I know that a commercial 4 layer PCB with a solder
> mask would probably work for homebrew construction; but the board cost is
> high.
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> So what is the chance of a double sided PCB without solder mask working with
> very small parts? The process I would use in either case would be:
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> 1. Place solder paste on all pads. Typically, when heated the solder will
> vacate between pins and will suck up, like a magnet, under the SMD pin.
>
> 2. Place glue under parts that will possible move when the board is handled.
>
> 3. Heat the PCB in a toaster oven until soldered. Manually follow the heat
> up and cool down time curves for type of solder paste used.
>
> Comments/suggestions are appreciated.

I agree with Leon and Tim that making a board and mounting parts on it
shouldn't be a problem, though I do greatly appreciate being able to
do my soldering under a stereo microscope using a Metcal iron.

I commonly use boards coated with positive resist (from Circuit
Specialists in the Phoenix area), etched by floating them on top of
ferric chloride. I find that (lacking a spray etcher) the float
process maintains fine line resolution--I have a theory that it has to
do with copper-laden etchant being heavier and falling away from the
etch site, but whatever, it works well for me. Surface tension will
hold fairly large boards up, but you can also just put support at the
corners and let the board submerge. Resolution for me is always
limited by the quality of the transparency. Thanks to Leon for
posting a reference to another film material to try. I've had the
best luck using an Epson inkjet printer: my HP printer doesn't do as
well, and laser printers typically don't print a dense enough black.
Pinholes WILL print on the board! I use a back-light film setting on
the Epson for highest density. An alternative is to get a
photoplotting shop to do the film for you: better quality but it
lacks the immediacy of being able go from layout to board in minutes.

Anyway, the best inkjet printed transparencies will allow me to do 5 mil lines with 5 mil spaces if I'm careful, and 8/8 pretty easily. Most of my work is with 0805 as the standard passive, since that's what I invested in an assortment of back a few years ago, but I also do 0603 with no trouble, and lead pitches down to 0.5mm. We have fancy equipment to do BGA rework here at work, and the trained techs have marginal success with it at best (for large parts), so I've avoided BGAs in my home projects.

By the way, if you get boards from Circuit Specialists, be aware that what they call 1 ounce copper is really 0.5 ounce...seldom a problem and allows faster etching and it's easier to make fine lines, but be aware of it for high current traces.

Cheers,
Tom

## 938. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 03:19:11 UTC
From: gb <w9nogbspam@arrlspamno.net>
Message-ID: <TY6dnYRc2I2qP_TVnZ2dnUVZ_uqdnZ2d@comcast.com>
Source record: 4875

<jimmie68@gmail.com> wrote in message
news:a82be280-9eb8-40c2-8b87-2f0c7a4de0ee@z32g2000prh.googlegroups.com...
>I have a 12volt home made power supply similar to Astron models. I was
> told it could handle 30A. The pass transistors are missing and I have
> some 50 amp NPN darlington transistors on hand I was considering using
> for replacements. Can you think of any reason these could/should not
> be used.
>
Good web page for your overall education and repair.
http://www.repeater-builder.com/astron/astron-index.html

Regulated Linear Power Supply Construction, or What's inside your AstronT?
by David Metz WA&#65533;AUQ

"Power Supply Analysis"
This is a PDF of an article from the December 2005 QST

## 939. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 09:58:56 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <c0ecb0f6-235e-4d42-ab63-83d6f5f0a166@b1g2000hsg.googlegroups.com>
Source record: 4876

On 1 Jul, 00:30, K7ITM <k7...@msn.com> wrote:
> On Jun 30, 10:12 am, "numeric" <nume...@att.net> wrote:
>
>
>
> > Hi,
>
> > I would like to build a PCB board with fine pitch (LQFP32) and very small
> > surface mount parts (1206 and smaller) parts. The board is a simple 24 bit
> > A/D and D/A converter with a full speed (12 Mbs) USB2 interface; although I
> > would prefer the USB2 high speed interface (480 Mbs). The temptation is too
> > hard to resist using today's microprocessors such as SiLabs C8051F350
> > (basically an 8051 cpu). I know that a commercial 4 layer PCB with a solder
> > mask would probably work for homebrew construction; but the board cost is
> > high.
>
> > So what is the chance of a double sided PCB without solder mask working with
> > very small parts? The process I would use in either case would be:
>
> > 1. Place solder paste on all pads. Typically, when heated the solder will
> > vacate between pins and will suck up, like a magnet, under the SMD pin.
>
> > 2. Place glue under parts that will possible move when the board is handled.
>
> > 3. Heat the PCB in a toaster oven until soldered. Manually follow the heat
> > up and cool down time curves for type of solder paste used.
>
> > Comments/suggestions are appreciated.
>
> I agree with Leon and Tim that making a board and mounting parts on it
> shouldn't be a problem, though I do greatly appreciate being able to
> do my soldering under a stereo microscope using a Metcal iron.
>
> I commonly use boards coated with positive resist (from Circuit
> Specialists in the Phoenix area), etched by floating them on top of
> ferric chloride.  I find that (lacking a spray etcher) the float
> process maintains fine line resolution--I have a theory that it has to
> do with copper-laden etchant being heavier and falling away from the
> etch site, but whatever, it works well for me.  Surface tension will
> hold fairly large boards up, but you can also just put support at the
> corners and let the board submerge.  Resolution for me is always
> limited by the quality of the transparency.  Thanks to Leon for
> posting a reference to another film material to try.  I've had the
> best luck using an Epson inkjet printer:  my HP printer doesn't do as

> well, and laser printers typically don't print a dense enough black.
> Pinholes WILL print on the board!  I use a back-light film setting on
> the Epson for highest density.  An alternative is to get a
> photoplotting shop to do the film for you:  better quality but it
> lacks the immediacy of being able go from layout to board in minutes.
> Anyway, the best inkjet printed transparencies will allow me to do 5
> mil lines with 5 mil spaces if I'm careful, and 8/8 pretty easily.
> Most of my work is with 0805 as the standard passive, since that's
> what I invested in an assortment of back a few years ago, but I also
> do 0603 with no trouble, and lead pitches down to 0.5mm.  We have
> fancy equipment to do BGA rework here at work, and the trained techs
> have marginal success with it at best (for large parts), so I've
> avoided BGAs in my home projects.
>
> By the way, if you get boards from Circuit Specialists, be aware that
> what they call 1 ounce copper is really 0.5 ounce...seldom a problem
> and allows faster etching and it's easier to make fine lines, but be
> aware of it for high current traces.
>
> Cheers,
> Tom

I use a Metcal and microscope, as well.

I use manual agitation in hot FeCl3. I don't have any problems getting
down to 8 mil tracks or even less.

Leon

## 940. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 10:02:17 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <6381a2c2-d91a-4c4b-bf49-68e44d8aec77@j22g2000hsf.googlegroups.com>
Source record: 4877

On 1 Jul, 00:30, K7ITM <k7...@msn.com> wrote:
> On Jun 30, 10:12 am, "numeric" <nume...@att.net> wrote:
.  Thanks to Leon for
> posting a reference to another film material to try.  I've had the
> best luck using an Epson inkjet printer:  my HP printer doesn't do as
> well,

The ordinary JetStar film is suitable for dye-based ink like that used
in Epson printers. Premium Jetstar is intended for use with pigment-
based inks used with HP printers. They are available from Mega
Electronics and Farnell.

Leon

# 941. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 11:00:42 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <KfOdnYXKh5zLk_fVnZ2dnUVZ8rednZ2d@pipex.net>
Source record: 4878

Tim Wescott wrote:
> jimmie68@gmail.com wrote:
>> I have a 12volt home made power supply similar to Astron models. I was
>> told it could handle 30A. The pass transistors are missing and I have
>> some 50 amp NPN darlington transistors on hand I was considering using
>> for replacements. Can you think of any reason these could/should not
>> be used.
>>
>> Jimmie
>
> Tons, but all of them start with 'maybe'.
>
> The biggest one is 'maybe your power supply was designed for straight
> transistors' -- if it seems to have hefty current drive to the pass
> transistor bases, then that would be the case.
>
> Otherwise, go ahead and put in your pass transistors and see what happens.
>
> Keep in mind that those pass transistors may be missing for a reason,
> and the reason may be that the power supply never worked well in the
> first place -- so if what you have doesn't work, it may be the design or
> execution of your circuit, not the transistors themselves.
==========
If the design of what you have is 'debatable' and having NPN Darlintons
which require relative low drive current you might consider a very
simple circuit with a LM317 in a wrap-around circuit.
Two references :
1) Experimental Methods in RF Design , by W7ZOI ,et al ,page 1.15

2) Radcom (RSGB) October 2001 ,page34 : A simple rugged power supply
,by OZ1XB

Frank GM0CSZ / KN6WH

## 942. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 12:11:35 UTC
From: SamSvL <samsvl@nlr.nl>
Message-ID: <Xns9ACE9017E5209samsvlnlrnl@192.87.166.15>
Source record: 4879

"numeric" <numeric@att.net> wrote in
news:pBbak.167256$SV4.153009@bgtnsc04-news.ops.worldnet.att.net:

>
> "Leon" <leon355@btinternet.com> wrote in message
> news:43fc4314-4163-45d1-a7f2-bf630c11c86e@y38g2000hsy.googlegroups.com.
> ..
>> I don't have any problems making PCBs at home for 0.5 mm lead spacing
>> QFPs, or soldering them. by hand (drag soldering).
>>
>> Leon
>
> Thanks for the reply. I have though about using a laser printer to
> print a negative image on clear Mylar. Then expose a photo sensitive
> PCB to the negative image. The laser printer does print very sharp
> lines as visible using a 10X loop. The quality should be good enough
> for fine pitch. The etching process however may end up in disaster
> with fine pitch lines. How do you make the PCB?
>
>
That's what I do. Then I transfer the layout to fotoboard2 by exposing
to my sunray for 5 minutes, and etch with sodium persulfate. Perfect
results. And soldering 0603 by hand is really no problem.

Sam

## 943. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 16:52:50 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <43cb1938-8f0c-4452-a0a4-0420cb88fefc@p25g2000pri.googlegroups.com>
Source record: 4880

On Jul 1, 3:02 am, Leon <leon...@btinternet.com> wrote:
> On 1 Jul, 00:30, K7ITM <k7...@msn.com> wrote:> On Jun 30, 10:12 am, "numeric"
<nume...@att.net> wrote:
>
> . Thanks to Leon for
>
> > posting a reference to another film material to try. I've had the
> > best luck using an Epson inkjet printer: my HP printer doesn't do as
> > well,
>
> The ordinary JetStar film is suitable for dye-based ink like that used
> in Epson printers. Premium Jetstar is intended for use with pigment-
> based inks used with HP printers. They are available from Mega
> Electronics and Farnell.
>
> Leon

These seem to be UK suppliers. So far, my Google searching hasn't turned up a source in the US for the JetStar films, though I am intrigued by the product lines that Valley Litho carry. There's been something of a revolution in how printing is done: professional laser printers are used for short runs, offset plates are made in various ways much more directly from computer-generated copy, and laser and inkjet printers are used to make positive and negative transparencies. Valley carries several items that claim to produce dense, clean copy for exposing plates or screen film, and that should be fine for PCB work too. I'll probably call them to get recommendations, since a hundred sheets of transparency film is a bit pricey to buy to just try out.

Cheers,
Tom

## 944. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 17:21:08 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <WdCdnWoQw_3o-vfVnZ2dnUVZ_gqdnZ2d@web-ster.com>
Source record: 4881

```
Highland Ham wrote:
> Tim Wescott wrote:
>> jimmie68@gmail.com wrote:
>>> I have a 12volt home made power supply similar to Astron models. I was
>>> told it could handle 30A. The pass transistors are missing and I have
>>> some 50 amp NPN darlington transistors on hand I was considering using
>>> for replacements. Can you think of any reason these could/should not
>>> be used.
>>>
>>> Jimmie
>>
>> Tons, but all of them start with 'maybe'.
>>
>> The biggest one is 'maybe your power supply was designed for straight
>> transistors' -- if it seems to have hefty current drive to the pass
>> transistor bases, then that would be the case.
>>
>> Otherwise, go ahead and put in your pass transistors and see what
>> happens.
>>
>> Keep in mind that those pass transistors may be missing for a reason,
>> and the reason may be that the power supply never worked well in the
>> first place -- so if what you have doesn't work, it may be the design
>> or execution of your circuit, not the transistors themselves.
> ========================================
> If the design of what you have is 'debatable' and having NPN Darlintons
> which require relative low drive current you might consider a very
> simple circuit with a LM317 in a wrap-around circuit.
> Two references :
> 1) Experimental Methods in RF Design , by W7ZOI ,et al ,page 1.15
>
> 2) Radcom (RSGB) October 2001 ,page34 : A simple rugged power supply
> ,by OZ1XB
>
>
> Frank GM0CSZ / KN6WH
>
Not to mention the ARRL handbook, which has several choices in their
power supply chapter.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com
```

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

## 945. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 17:43:03 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <b7f1eb6e-6d07-4d91-b80e-08805155ac2a@e39g2000hsf.googlegroups.com>
Source record: 4882

On 1 Jul, 17:52, K7ITM <k7...@msn.com> wrote:
> On Jul 1, 3:02 am, Leon <leon...@btinternet.com> wrote:
>
> > On 1 Jul, 00:30, K7ITM <k7...@msn.com> wrote:> On Jun 30, 10:12 am, "numeric"
<nume...@att.net> wrote:
>
> > . Thanks to Leon for
>
> > > posting a reference to another film material to try. I've had the
> > > best luck using an Epson inkjet printer: my HP printer doesn't do as
> > > well,
>
> > The ordinary JetStar film is suitable for dye-based ink like that used
> > in Epson printers. Premium Jetstar is intended for use with pigment-
> > based inks used with HP printers. They are available from Mega
> > Electronics and Farnell.
>
> > Leon
>
> These seem to be UK suppliers. So far, my Google searching hasn't
> turned up a source in the US for the JetStar films, though I am
> intrigued by the product lines that Valley Litho carry. There's been
> something of a revolution in how printing is done: professional laser
> printers are used for short runs, offset plates are made in various
> ways much more directly from computer-generated copy, and laser and
> inkjet printers are used to make positive and negative
> transparencies. Valley carries several items that claim to produce
> dense, clean copy for exposing plates or screen film, and that should
> be fine for PCB work too. I'll probably call them to get
> recommendations, since a hundred sheets of transparency film is a bit
> pricey to buy to just try out.
>
> Cheers,
> Tom

Silkjet film seems to be similar and is available in the US. They even
make two types for dye and pigment inks, like Mega do. It might be the
same stuff, renamed for a different market.

Leon

# 946. Re: Home made PCB?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 19:01:44 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <688e0900-1397-49da-bead-e442047f5154@d19g2000prm.googlegroups.com>
Source record: 4883

On Jul 1, 10:43 am, Leon <leon...@btinternet.com> wrote:
> On 1 Jul, 17:52, K7ITM <k7...@msn.com> wrote:
>
>
>
> > On Jul 1, 3:02 am, Leon <leon...@btinternet.com> wrote:
>
> > > On 1 Jul, 00:30, K7ITM <k7...@msn.com> wrote:> On Jun 30, 10:12 am, "numeric"
<nume...@att.net> wrote:
>
> > > . Thanks to Leon for
>
> > > > posting a reference to another film material to try. I've had the
> > > > best luck using an Epson inkjet printer: my HP printer doesn't do as
> > > > well,
>
> > > The ordinary JetStar film is suitable for dye-based ink like that used
> > > in Epson printers. Premium Jetstar is intended for use with pigment-
> > > based inks used with HP printers. They are available from Mega
> > > Electronics and Farnell.
>
> > > Leon
>
> > These seem to be UK suppliers. So far, my Google searching hasn't
> > turned up a source in the US for the JetStar films, though I am
> > intrigued by the product lines that Valley Litho carry. There's been
> > something of a revolution in how printing is done: professional laser
> > printers are used for short runs, offset plates are made in various
> > ways much more directly from computer-generated copy, and laser and
> > inkjet printers are used to make positive and negative
> > transparencies. Valley carries several items that claim to produce
> > dense, clean copy for exposing plates or screen film, and that should
> > be fine for PCB work too. I'll probably call them to get
> > recommendations, since a hundred sheets of transparency film is a bit
> > pricey to buy to just try out.
>
> > Cheers,
> > Tom
>
> Silkjet film seems to be similar and is available in the US. They even
> make two types for dye and pigment inks, like Mega do. It might be the
> same stuff, renamed for a different market.
>
> Leon

Thanks, Leon! I really appreciate your inputs that have gotten me pointed in some new directions. Maybe all this will get some other folk experimenting and reporting back their results. First: Silkjet is a brand of Kimoto, so if you search for Kimoto you may find more suppliers and info. (They also make high quality laser printer film.) Second: if you do searches like "screen printing inkjet film" you'll find a bunch of stuff. My belief is that a film that's really suitable for exposing screen printing emulsions is very likely going to be suitable for transparencies for PC printing. Also, I found one place at least that offers a ten-sheet sample pack of Silkjet (recommended for Epson printers) for $10; I just ordered one--they seem to not have a minimum order, even. (shop.poconoscreen.com) And with the right supplies, you may be able to do as well (or better?) with a laser printer; see for example the Valley Litho web site -- and a search on "screen printing laser film" turns up lots of stuff too. The key seems to be finding out where inkjet and laser printed transparencies are being used commercially, and screen printing is clearly one of those areas.

Cheers,
Tom

## 947. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-01 22:20:44 UTC
From: jimmie68@gmail.com
Message-ID: <23f965fa-967f-4bfb-b2bc-aa6cc2350fb9@w5g2000prd.googlegroups.com>
Source record: 4884

Tim Wescott wrote:
> jimmie68@gmail.com wrote:
> > I have a 12volt home made power supply similar to Astron models. I was
> > told it could handle 30A. The pass transistors are missing and I have
> > some 50 amp NPN darlington transistors on hand I was considering using
> > for replacements. Can you think of any reason these could/should not
> > be used.
> >
> > Jimmie
>
> Tons, but all of them start with 'maybe'.
>
> The biggest one is 'maybe your power supply was designed for straight
> transistors' -- if it seems to have hefty current drive to the pass
> transistor bases, then that would be the case.
>
> Otherwise, go ahead and put in your pass transistors and see what happens.
>
> Keep in mind that those pass transistors may be missing for a reason,
> and the reason may be that the power supply never worked well in the
> first place -- so if what you have doesn't work, it may be the design or
> execution of your circuit, not the transistors themselves.
>
> --

Tim I made a few repairs that were obvious and discovered the power
supply design was minimal at best. It does have what seems to be a
very heavy duty transformer probably 30 amps CCS. There is no
overcurrent/overvoltage protection. The heat sinks are small in
comparison to my Pyramid brand 20 amp power supply. The transformer is
center tapped but a paralelled pair of bridge rectifers are being used
with the (-) leads disconnected. The regulator doesnt have its own
power supply or even operate from higher voltage taps on the
transformer. Oh well, I bought it for the transformer and it looks
like I got a good deal on that and the box.

Jimmie

## 948. Re: Hams take note: qth.net/qsl.net: is it just me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-02 00:23:36 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0807012021180.8182@panix1.panix.com>
Source record: 4885

I don't spend a lot of time using the internet to go to ham radio related websites, but at least one website I know about runs at a financial deficit and not enough human resources so that might be part of the problem. There could be technical reasons, too. But, I, at least, would appreciate knowing if you still have this problem repeatedly in the future.

On Mon, 30 Jun 2008, Mike Andrews wrote:

> Is anyone else having trouble seeing, or getting mail to, any of the
> lists based at qsl.net or qth.net? They appear to have fallen off the
> edge of the 'Net, and DNS for both domains is failing right now for me.
>
> Thanks & 73, de
>
> --
> Mike Andrews, W5EGO
> mikea@mikea.ath.cx
> Tired old sysadmin
>

## 949. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-02 00:49:21 UTC
From: jimmie68@gmail.com
Message-ID: <ffea6ec8-2941-4a65-9626-859a301fa264@v26g2000prm.googlegroups.com>
Source record: 4886

Highland Ham wrote:
> Tim Wescott wrote:
> > jimmie68@gmail.com wrote:
> >> I have a 12volt home made power supply similar to Astron models. I was
> >> told it could handle 30A. The pass transistors are missing and I have
> >> some 50 amp NPN darlington transistors on hand I was considering using
> >> for replacements. Can you think of any reason these could/should not
> >> be used.
> >>
> >> Jimmie
> >
> > Tons, but all of them start with 'maybe'.
> >
> > The biggest one is 'maybe your power supply was designed for straight
> > transistors' -- if it seems to have hefty current drive to the pass
> > transistor bases, then that would be the case.
> >
> > Otherwise, go ahead and put in your pass transistors and see what happens.
> >
> > Keep in mind that those pass transistors may be missing for a reason,
> > and the reason may be that the power supply never worked well in the
> > first place -- so if what you have doesn't work, it may be the design or
> > execution of your circuit, not the transistors themselves.
> ==========
> If the design of what you have is 'debatable' and having NPN Darlintons
> which require relative low drive current you might consider a very
> simple circuit with a LM317 in a wrap-around circuit.
> Two references :
> 1) Experimental Methods in RF Design , by W7ZOI ,et al ,page 1.15
>
> 2) Radcom (RSGB) October 2001 ,page34 : A simple rugged power supply
> ,by OZ1XB
>
>
> Frank GM0CSZ / KN6WH

For what it worth almost any 3 legged regulator will work in this
circuit. The minimum voltage of the power supply will depend on the
voltage of the regulator. Basically the LM317 is a 1.25 volt
regulator.

Jimmie

# 950. Re: Hams take note: qth.net/qsl.net: is it just me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-02 01:11:34 UTC
From: dplatt@radagast.org
Message-ID: <671rj5-2kv.ln1@radagast.org>
Source record: 4887

On Mon, 30 Jun 2008, Mike Andrews wrote:

> Is anyone else having trouble seeing, or getting mail to, any of the
> lists based at qsl.net or qth.net? They appear to have fallen off the
> edge of the 'Net, and DNS for both domains is failing right now for me.

Both sites come up promptly for me here today. I've seen them be quite
sluggish in the past, but that's not the case just at this moment.

## 951. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-02 11:04:48 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <S7mdnZlKEvlM_fbVnZ2dneKdnZydnZ2d@pipex.net>
Source record: 4888

```
jimmie68@gmail.com wrote:
>
> Highland Ham wrote:
>> Tim Wescott wrote:
>>> jimmie68@gmail.com wrote:
>>>> I have a 12volt home made power supply similar to Astron models. I was
>>>> told it could handle 30A. The pass transistors are missing and I have
>>>> some 50 amp NPN darlington transistors on hand I was considering using
>>>> for replacements. Can you think of any reason these could/should not
>>>> be used.
>>>>
>>>> Jimmie
>>> Tons, but all of them start with 'maybe'.
>>>
>>> The biggest one is 'maybe your power supply was designed for straight
>>> transistors' -- if it seems to have hefty current drive to the pass
>>> transistor bases, then that would be the case.
>>>
>>> Otherwise, go ahead and put in your pass transistors and see what happens.
>>>
>>> Keep in mind that those pass transistors may be missing for a reason,
>>> and the reason may be that the power supply never worked well in the
>>> first place -- so if what you have doesn't work, it may be the design or
>>> execution of your circuit, not the transistors themselves.
>> ========================================
>> If the design of what you have is 'debatable' and having NPN Darlintons
>> which require relative low drive current you might consider a very
>> simple circuit with a LM317 in a wrap-around circuit.
>> Two references :
>> 1) Experimental Methods in RF Design , by W7ZOI ,et al ,page 1.15
>>
>> 2) Radcom (RSGB) October 2001 ,page34 : A simple rugged power supply
>> ,by OZ1XB
>>
>>
>> Frank GM0CSZ / KN6WH
>
> For what it worth almost any 3 legged regulator will work in this
> circuit. The minimum voltage of the power supply will depend on the
> voltage of the regulator. Basically the LM317 is a 1.25 volt
> regulator.
==========================
The LM317 ,being basically a 1.25 v regulator can have a variable output
by means of a potmeter or any fixed output by means of 2 fixed resistors
```

,that's why it is often used as a universal device.

Frank GM0CSZ / KN6WH

## 952. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-02 12:42:18 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <52fc1cc4-417a-40a0-9e11-dd01b6ff477c@r66g2000hsg.googlegroups.com>
Source record: 4889
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> Appropriately, a CB radio, illegally modified. Only a CBer would fall for this
> "Speech Processor."

Yes, VoiceMax is selling well. We are unable to keep up with the
demand at this time. These units are back-ordered until late August08.

## 953. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-02 14:41:44 UTC
From: Channel Cop <nedrog@yahoo.com>
Message-ID: <wOKdnSGmo7UeDvbVnZ2dnUVZ_qLinZ2d@comcast.com>
Source record: 4890
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
news:52fc1cc4-417a-40a0-9e11-dd01b6ff477c@r66g2000hsg.googlegroups.com...
>> Appropriately, a CB radio, illegally modified. Only a CBer would fall for
>> this
>> "Speech Processor."
>
> Yes, VoiceMax is selling well. We are unable to keep up with the
> demand at this time. These units are back-ordered until late August08.

sound more like the garbage that fell off of the BACK of the animal while it
was taking a CRAP. OH - wait a minute - "back-ordered" - that is the
convention that you go out and turn-around and order something?
>

# 954. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-02 16:11:20 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <0b014fa4-ec60-43d2-b9af-b2d7b3a7dbfe@z24g2000prf.googlegroups.com>
Source record: 4891

On Jul 2, 4:04 am, Highland Ham <abcgm0csz.kn6wh...@dsl.pipex.com>
wrote:
> jimmi...@gmail.com wrote:
>
> > Highland Ham wrote:
> >> Tim Wescott wrote:
> >>> jimmi...@gmail.com wrote:
> >>>> I have a 12volt home made power supply similar to Astron models. I was
> >>>> told it could handle 30A. The pass transistors are missing and I have
> >>>> some 50 amp NPN darlington transistors on hand I was considering using
> >>>> for replacements. Can you think of any reason these could/should not
> >>>> be used.
>
> >>>> Jimmie
> >>> Tons, but all of them start with 'maybe'.
>
> >>> The biggest one is 'maybe your power supply was designed for straight
> >>> transistors' -- if it seems to have hefty current drive to the pass
> >>> transistor bases, then that would be the case.
>
> >>> Otherwise, go ahead and put in your pass transistors and see what happens.
>
> >>> Keep in mind that those pass transistors may be missing for a reason,
> >>> and the reason may be that the power supply never worked well in the
> >>> first place -- so if what you have doesn't work, it may be the design or
> >>> execution of your circuit, not the transistors themselves.
> >> ==========
> >> If the design of what you have is 'debatable' and having NPN Darlintons
> >> which require relative low drive current you might consider a very
> >> simple circuit with a LM317 in a wrap-around circuit.
> >> Two references :
> >> 1) Experimental Methods in RF Design , by W7ZOI ,et al ,page 1.15
>
> >> 2) Radcom (RSGB) October 2001 ,page34 : A simple rugged power supply
> >> ,by OZ1XB
>
> >> Frank GM0CSZ / KN6WH
>
> > For what it worth almost any 3 legged regulator will work in this
> > circuit. The minimum voltage of the power supply will depend on the
> > voltage of the regulator. Basically the LM317 is a 1.25 volt
> > regulator.
>
> ==========

> The LM317 ,being basically a 1.25 v regulator can have a variable output
> by means of a potmeter or any fixed output by means of 2 fixed resistors
> ,that's why it is often used as a universal device.
>
> Frank GM0CSZ / KN6WH

Linear Technology has recently introduced an interesting new regulator that should get the attention of experimenters wanting a variable bench supply that goes easily down to zero volts. You can consider it an amplified emitter follower with max offset of a very few millivolts, along with a precision 10uA current source feeding the input pin. So you hook a variable resistor between the input pin and ground, and the output voltage is R*10uA. It's also acceptable to drive the input pin with a voltage source, such as the output of a DAC, if you want. Guess I should mention that it's the LT3080. The design choices that went into it make it easy to parallel, and also easy to add a "pre-regulator" so that the '3080 doesn't have to dissipate all the power when delivering low output voltage from a high unregulated input. (No, I don't work for them...just think it's a cool part.)

Cheers,
Tom

## 955. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-03 07:35:13 UTC
From: Wim Lewis <wiml@hhhh.org>
Message-ID: <g3n7et$8ql$1@underhill.hhhh.org>
Source record: 4892

In article <q6f6k.61015$Ni1.7141@trnddc01>, Al <no.spam@wanted.com> wrote:
>If my access is denied, I will encourage my Senate and House delegations
>to enact legistation that will restore my legitimate access to these
>groups. I think the last thing you would want is more legislation on your
>networks.

They're not really denying you access; they're just no longer running a
USENET server as part of their ISP business any more. You can still get
to those groups ... you'll just have to pay someone else for usenet
access. (Or get it for free from, say, aioe.org, or use google's lame web
interface, etc.)

As such I don't think this is something for the law to be involved in.
Verizon's decided to drop part of their service, but there's room in
the world for crappy ISPs alongside the good ones.

If Verizon decided to start blocking access to other companies' news
servers, or forge reset packets, etc., the way Comcast (allegedly?)
does, then you'd have something to write your representatives about.

You might be able to get out of any contract you have with them, on
the basis they've changed the service without renegotiating...
people seem to do that for cell-phone contracts a lot.
--
Wim Lewis <wiml@hhhh.org>, Seattle, WA, USA. PGP keyID 27F772C1

# 956. ***** POSSIBLE FIRE HAZZARD *****

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-03 10:41:06 UTC
From: W3CQH <hsgorden@comcast.net>
Message-ID: <O6mdnWNQJ_gBMfHVnZ2dnUVZ_q_inZ2d@comcast.com>
Source record: 4893
Cross-posted to: alt.ham-radio.packet,alt.ham-radio.rtty,alt.ham-radio.vhf-uhf,alt.radio.amateur.club.taparc,news.misc.radio.amateur.antenna,rec.radio.amateur.digital,rec.radio.amateur.homebrew,rec.radio.amateur.packet

U.S. Consumer Product Safety Commission
Office of Information and Public Affairs
Washington, DC 20207

FOR IMMEDIATE RELEASE
July 2, 2008
Release #08-319

Firm's Recall Hotline: (800) 843-7422
CPSC Recall Hotline: (800) 638-2772
CPSC Media Contact: (301) 504-7908

RadioShack Recalls Power Supplies Due to Electrocution and Fire Hazards

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products
immediately unless otherwise instructed.

Name of Product: 13.8V DC Power Supplies

Units: About 160,000

Importer: RadioShack Corp., of Fort Worth, Texas

Hazard: The recalled power supplies are wired incorrectly, posing electrocution and fire hazards.

Incidents/Injuries: None reported.

Description: The recall involves RadioShack 13.8V DC Power Supplies, catalog numbers 22-507 and 22-508 with date codes from 08A04 through 01A08.

Date code format is MMAYY where MM is the month and YY is the year. The catalog number and date code are located on the back of the power supply. Power Supplies with a green dot on the product and the product's packaging have already been repaired and are not included in the recall.

Sold at: RadioShack stores nationwide from October 2004 through January 2008 for between $50 and $85.

Manufactured in: China

Remedy: Consumers should unplug the recalled power supply immediately and take it to
any RadioShack store for a free repair. Registered owners of the recalled

power supplies
will be mailed a notice.

Consumer Contact: For additional information, contact RadioShack at
800-843-7422 anytime, or visit the firm's website at:

http://www.radioshack.com/recall

To see this recall on CPSC's web site, including pictures of the recalled
products, please go to:

http://www.cpsc.gov/cpscpub/prerel/prhtm108/08319.html

# 957. Re: Newsgroup Elimination

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-03 12:07:00 UTC
From: A <arthures@panix.com>
Message-ID: <Pine.NEB.4.64.0807030804360.20892@panix2.panix.com>
Source record: 4894

On Thu, 3 Jul 2008, Wim Lewis wrote:

> In article <q6f6k.61015$Ni1.7141@trnddc01>, Al <no.spam@wanted.com> wrote:
>> If my access is denied, I will encourage my Senate and House delegations
>> to enact legistation that will restore my legitimate access to these
>> groups. I think the last thing you would want is more legislation on your
>> networks.
>
> They're not really denying you access; they're just no longer running a
> USENET server as part of their ISP business any more. You can still get
> to those groups ... you'll just have to pay someone else for usenet
> access. (Or get it for free from, say, aioe.org, or use google's lame web
> interface, etc.)
>
> As such I don't think this is something for the law to be involved in.
> Verizon's decided to drop part of their service, but there's room in
> the world for crappy ISPs alongside the good ones.
>
> If Verizon decided to start blocking access to other companies' news
> servers, or forge reset packets, etc., the way Comcast (allegedly?)
> does, then you'd have something to write your representatives about.
>
> You might be able to get out of any contract you have with them, on
> the basis they've changed the service without renegotiating...
> people seem to do that for cell-phone contracts a lot.

He'd better review all the fine print in his contracts, updates,
references to disclaimers, and consider that those high powered lawyers
have an interpretation somewhere that lets them do this and almost
anything else without recourse to the user.

> --
> Wim Lewis <wiml@hhhh.org>, Seattle, WA, USA. PGP keyID 27F772C1
>

## 958. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-03 18:27:09 UTC
From: NoMoreSpam <Disgustedham@qrparci.org>
Message-ID: <486D19FD.9060507@qrparci.org>
Source record: 4895
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Telstar Electronics wrote:
>> Appropriately, a CB radio, illegally modified. Only a CBer would fall for this
>> "Speech Processor."
>
> Yes, VoiceMax is selling well. We are unable to keep up with the
> demand at this time. These units are back-ordered until late August08.
>
Just another example of how many morons are passing the so-called "exams" these
days.

## 959. Source For Modem Transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-03 22:03:04 UTC
From: Howie <wa2afd@gmail.com>
Message-ID: <dc42df9a-0455-465c-b876-4b4d6bc0c57c@27g2000hsf.googlegroups.com>
Source record: 4896

Hello to all and thanks for reading.

I am seeking info on a source for inexpensive modem transformers for use in a PSK31 type interface. A few years ago I purchased surplus ones for less than a dollar a piece, now the only ones I can find are $3 to $4 a piece.

Any info for these 600 to 600 ohm transformers appreciated.

Howard

# 960. Re: Source For Modem Transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-04 01:59:50 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0807032156240.21760@darkstar.example.org>
Source record: 4897

On Thu, 3 Jul 2008, Howie wrote:

> Hello to all and thanks for reading.
>
> I am seeking info on a source for inexpensive modem transformers for
> use in a PSK31 type interface. A few years ago I purchased surplus
> ones for less than a dollar a piece, now the only ones I can find are
> $3 to $4 a piece.
>
> Any info for these 600 to 600 ohm transformers appreciated.
>
> Howard
>

Discarded modems are an obvious source of cheap modem transformers.
Just keep an eye out for computers waiting for the garbage trucks, and
then open them up with the screwdriver you should carry for such
circumstances, and pull out the modem boards. You don't even have
to open them to see if there's a modem, just look for a pair of phone
jacks on the back. A lot of those modems nowadays aren't that much
more than the phone interface, the main CPU doing the work, so there's
no real loss in using such modems to supply the transformers.

Cordless phones are easy to find at garage and rummage sales, for
a dollar or two. All the base units will supply a transformer, though
maybe not as small as the ones in the modems.

Find a surplus outlet that has piles of boards, and that may be a source
if they let the boards go cheap, since you just have to pick out the
modem boards.

Michael VE2BVW

# 961. Re: source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-05 04:01:23 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <486ef20e@clear.net.nz>
Source record: 4898

Steve H wrote:

> cliff wright wrote:
>
>> Good day all!
>> I have an old Kenwood TS-820 that I've already upgraded somewhat, but
>> I would like to try adding the WARC bands at 10,18 and 24 MHz.
>> The rig only cost me $50 so I was horrified when I discovered that
>> crystals for the job are now priced @ $65 US each + shipping!!!
>> The frequencies aren't very unusual so obviously I am looking for
>> someone who has them available for a more reasonable rate.
>> As it stands it just isn't worth the cost of over $250 NZ.
>> The Xtals are on 15.5 23.5 and 30 MHz and are standard miniature types.
>> If any one can help me out please drop me an Email and let me know how
>> I can pay for them.
>> 73's
>> Cliff Wright ZL1BDA ex G3NIA
>>
>
> Try http://www.quartslab.com/ , they are happy to supply radio amateurs
> and can provide any frequency to order for a fair price. (less than $20.00)
>
> Steve H

Hi Jim, Tim and Steve!
Thanks for the reply. I had of course considered microprocessor crystals and in the case of the 30.00 MHz one this wasn't a unusual frequency. However many units these days come with an integral oscillator.
I had tried several Xtal companies in the US and elsewhere but the price as I had pointed out was a bit "out of sight" for such an old rig. Also I have had a lot of trouble with US companies in both my hobbies, Ham radio and Amateur astronomy with overseas orders.
Owing to the 820s' rather odd IF frequency (~8.3 MHz)the heterodyne crystals are rather critical if dial and counter calibration is to be maintained.
Very fortunately however I was contacted by Ric VK7RO in Tasmania who had both the higher frequency units "gathering dust" from a similar project and he not only very generously and kindly donated them to me but pointed me in the direction of an Australian Xtal company who can make me the 15.5000 Mhz crystal for less than half the US price and one third the delivery time. I hope to have all the cystals to put the 820s on 10, 18 and 24 MHz in the next week or so and then will get the job underway. As I have never worked the WARC bands so far it will be a new experience for me !!
Regards Cliff Wright ZL1BDA ex G3NIA

# 962. Re: source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-05 16:39:13 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <xNGdnY1Xqa0wPvLVnZ2dnUVZ_gCdnZ2d@web-ster.com>
Source record: 4899

cliff wright wrote:
> Steve H wrote:
>
>> cliff wright wrote:
>>
>>> Good day all!
>>> I have an old Kenwood TS-820 that I've already upgraded somewhat, but
>>> I would like to try adding the WARC bands at 10,18 and 24 MHz.
>>> The rig only cost me $50 so I was horrified when I discovered that
>>> crystals for the job are now priced @ $65 US each + shipping!!!
>>> The frequencies aren't very unusual so obviously I am looking for
>>> someone who has them available for a more reasonable rate.
>>> As it stands it just isn't worth the cost of over $250 NZ.
>>> The Xtals are on 15.5 23.5 and 30 MHz and are standard miniature types.
>>> If any one can help me out please drop me an Email and let me know
>>> how I can pay for them.
>>> 73's
>>> Cliff Wright ZL1BDA ex G3NIA
>>>
>>
>> Try http://www.quartslab.com/ , they are happy to supply radio
>> amateurs and can provide any frequency to order for a fair price.
>> (less than $20.00)
>>
>> Steve H
> Hi Jim, Tim and Steve!
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> and in the case of the 30.00 MHz one this wasn't a unusual frequency.
> However many units these days come with an integral oscillator.
> I had tried several Xtal companies in the US and elsewhere but the price
> as I had pointed out was a bit "out of sight" for such an old rig. Also
> I have had a lot of trouble with US companies in both my hobbies, Ham
> radio and Amateur astronomy with overseas orders.
> Owing to the 820s' rather odd IF frequency (~8.3 MHz)the heterodyne
> crystals are rather critical if dial and counter calibration is to be
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> make me the 15.5000 Mhz crystal for less than half the US price and one
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> on 10, 18 and 24 MHz in the next week or so and then will get the job
> underway. As I have never worked the WARC bands so far it will be a new

> experience for me !!
> Regards Cliff Wright ZL1BDA ex G3NIA

Cliff, I'm glad you found a source.

And going with an in-country company is good for that sort of thing,
when you can find it.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 963. Re: source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-05 22:15:45 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <486ff28e$1@clear.net.nz>
Source record: 4900

Tim Wescott wrote:
> cliff wright wrote:
>
>> Steve H wrote:
>>
>>> cliff wright wrote:
>>>
>>>> Good day all!
>>>> I have an old Kenwood TS-820 that I've already upgraded somewhat,
>>>> but I would like to try adding the WARC bands at 10,18 and 24 MHz.
>>>> The rig only cost me $50 so I was horrified when I discovered that
>>>> crystals for the job are now priced @ $65 US each + shipping!!!
>>>> The frequencies aren't very unusual so obviously I am looking for
>>>> someone who has them available for a more reasonable rate.
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>>>> The Xtals are on 15.5 23.5 and 30 MHz and are standard miniature types.
>>>> If any one can help me out please drop me an Email and let me know
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>>>> 73's
>>>> Cliff Wright ZL1BDA ex G3NIA
>>>>
>>>
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>>> Steve H
>>
>> Hi Jim, Tim and Steve!
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>> crystals and in the case of the 30.00 MHz one this wasn't a unusual
>> frequency.
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>> I had tried several Xtal companies in the US and elsewhere but the
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>> hobbies, Ham radio and Amateur astronomy with overseas orders.
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>> but pointed me in the direction of an Australian Xtal company who can

>> make me the 15.5000 Mhz crystal for less than half the US price and
>> one third the delivery time. I hope to have all the cystals to put the
>> 820s on 10, 18 and 24 MHz in the next week or so and then will get the
>> job underway. As I have never worked the WARC bands so far it will be
>> a new experience for me !!
>> Regards Cliff Wright ZL1BDA ex G3NIA
>
>
> Cliff, I'm glad you found a source.
>
> And going with an in-country company is good for that sort of thing,
> when you can find it.
>
Well, not quite OM. I'm in New Zealamd and about 2,000 Km from Tasmania.
We are still an independent country so far . Hi!!!
Cliff

# 964. Re: source of crystals for Kenwood transceiver upgrade.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-05 23:01:57 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <qeidnZXQydzAYPLVnZ2dnUVZ_rXinZ2d@web-ster.com>
Source record: 4801

cliff wright wrote:
> Tim Wescott wrote:
>> cliff wright wrote:
>>
>>> Steve H wrote:
>>>
>>>> cliff wright wrote:
>>>>
>>>>> Good day all!
>>>>> I have an old Kenwood TS-820 that I've already upgraded somewhat,
>>>>> but I would like to try adding the WARC bands at 10,18 and 24 MHz.
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>>>>> someone who has them available for a more reasonable rate.
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>>>>> types.
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>>>> Steve H
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>>> I had tried several Xtal companies in the US and elsewhere but the
>>> price as I had pointed out was a bit "out of sight" for such an old
>>> rig. Also I have had a lot of trouble with US companies in both my
>>> hobbies, Ham radio and Amateur astronomy with overseas orders.
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>>> but pointed me in the direction of an Australian Xtal company who can
>>> make me the 15.5000 Mhz crystal for less than half the US price and
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>>> the 820s on 10, 18 and 24 MHz in the next week or so and then will
>>> get the job underway. As I have never worked the WARC bands so far it
>>> will be a new experience for me !!
>>> Regards Cliff Wright ZL1BDA ex G3NIA
>>
>>
>> Cliff, I'm glad you found a source.
>>
>> And going with an in-country company is good for that sort of thing,
>> when you can find it.
>>
> Well, not quite OM. I'm in New Zealamd and about 2,000 Km from Tasmania.
> We are still an independent country so far . Hi!!!
> Cliff

Whoops.

All I know about geography is that the civilized world ends at the
Mississippi river.

Which is what they think in New York, too, but those crazy folks think
that _they're_ in the civilized world!

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 965. CTCSS For FDK Multi 7

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-06 08:57:40 UTC
From: vk3fasw@gmail.com
Message-ID: <aa2289ca-f4f1-4acd-bf9f-abdb55f05aa7@l64g2000hse.googlegroups.com>
Source record: 4802

Our local repeater has just started to use CTCSS and my poor old 2m
Rig has no CTCSS.
Has anyone got a simple circuit for this, also i think i will need a
circuit diargam for the radio. It is an old FDK Multi7, crystal rig.

Any help or suggestions would be great!

Andre

VK3FASW

## 966. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-06 19:25:10 UTC
From: RBorowiak@gmail.com
Message-ID: <d753e152-b96f-45f8-b445-ccbabfb829ae@a1g2000hsb.googlegroups.com>
Source record: 4803

On Jul 1, 6:20 pm, jimmi...@gmail.com wrote:
> Tim Wescott wrote:
> > jimmi...@gmail.com wrote:
> > > I have a 12volt home made power supply similar to Astron models. I was
> > > told it could handle 30A. The pass transistors are missing and I have
> > > some 50 amp NPN darlington transistors on hand I was considering using
> > > for replacements. Can you think of any reason these could/should not
> > > be used.
>
> > > Jimmie
>
> > Tons, but all of them start with 'maybe'.
>
> > The biggest one is 'maybe your power supply was designed for straight
> > transistors' -- if it seems to have hefty current drive to the pass
> > transistor bases, then that would be the case.
>
> > Otherwise, go ahead and put in your pass transistors and see what happens.
>
> > Keep in mind that those pass transistors may be missing for a reason,
> > and the reason may be that the power supply never worked well in the
> > first place -- so if what you have doesn't work, it may be the design or
> > execution of your circuit, not the transistors themselves.
>
> > --
>
> Tim I made a few repairs that were obvious and discovered the power
> supply design was minimal at best. It does have what seems to be a
> very heavy duty transformer probably 30 amps CCS. There is no
> overcurrent/overvoltage protection. The heat sinks are small in
> comparison to my Pyramid brand 20 amp power supply. The transformer is
> center tapped but a paralelled pair of bridge rectifers are being used
> with the (-) leads disconnected. The regulator doesnt have its own
> power supply or even operate from higher voltage taps on the
> transformer. Oh well, I bought it for the transformer and it looks
> like I got a good deal on that and the box.
>
> Jimmie

Personally I use a cheap FET,100 amps is like $3.00. With 0.004 ohms
on resistance. Dual 30 amp schottky diodes for a 60 amp bridge. A
TL431 as under voltage detector to clamp the gate to ground for short
circuit protection. I gain a few extra volts because of the diode drop
is lower and low on resistance of the FET. Which translates into more

current from the same supply, that used bipolar transistors and regular diode bridge.

73,

N8ZU

# 967. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-06 19:47:55 UTC
From: RBorowiak@gmail.com
Message-ID: <06d46cb5-beff-4f42-b136-526ee11c8473@59g2000hsb.googlegroups.com>
Source record: 4804

On Jun 16, 5:05 pm, "Joel Koltner" <zapwireDASHgro...@yahoo.com>
wrote:
> Just curious... does anyone know what sort of architecture you find in your
> typical HT or mobile "receives everything from 100kHz - 1.3GHz!" radio to
> generate such a vast range of frequencies while still keeping the prices so
> low (plenty are available for <$200, and I can't expect the LO makes up a
> particularly large percentage of that total price)? I would tend to lean
> towards something PLL-based given the typically channelized nature of
> available frequencies, but a single PLL would still need a VCO with a huge
> tuning range. So... perhaps a pair of mixed PLLs, with one doing the fine
> tuning and another the coarse tuning (having been multiplied up from a low
> frequency)?
>
> I attempted to decipher the schematic included with my Yaesu FTM-10R, but
> everything is so tiny it was rather hopeless!
>
> I don't suppose any of the reviews ever go through and sweep the LOs while
> watching for the worst case spur conditions, do they?
>
> ---Joel

The one I had used triple conversion superhet. Mircoprocessor
controlled.
The first IF was like 336Mhz to 10.7Mhz to 455Khz. There was no front
end. just direct conversion to the IF. So all the micro had to do was
control the oscillator from 336Mhz to 900Mhz using up conversion on
the low bands and down conversion on the higher bands. Cell phone band
was locked out. Guess what you can pick cell phone band on the image
frequency back in the day.

73

N8ZU

# 968. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-07 05:08:21 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <DeudnYM07PCpGu_V4p2dnAA@pipex.net>
Source record: 4808

> The one I had used triple conversion superhet. Mircoprocessor
> controlled.
> The first IF was like 336Mhz to 10.7Mhz to 455Khz. There was no front
> end. just direct conversion to the IF. So all the micro had to do was
> control the oscillator from 336Mhz to 900Mhz using up conversion on
> the low bands and down conversion on the higher bands. Cell phone band
> was locked out. Guess what you can pick cell phone band on the image
> frequency back in the day.
========
Are analog cellphones still used in the USA ?
I thought by now it is all digital sigs which can not be received with a
'normal' receiver , so what's the reason to 'lock out' the cellphone
frequencies ?

Frank GM0CSZ / KN6WH

## 969. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-07 06:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1215410701@panix.com>
Source record: 4805
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

## 970. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-07 11:23:51 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <bf4c39a7-d6cf-46eb-bbbd-5ab1b9ae3eca@d77g2000hsb.googlegroups.com>
Source record: 4806
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jul 2, 9:41 am, "Channel Cop" <ned...@yahoo.com> wrote:
> sound more like the garbage that fell off of the BACK of the animal while it
> was taking a CRAP.  OH - wait a minute - "back-ordered" - that is the
> convention that you go out and turn-around and order something?

Thanks for your comment. In regard to your email... more VoiceMax
modules will be available earlier than expected... around August 1st.
We should have a few left after the back-orders are sent out.

www.telstar-electronics.com

## 971. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-07 17:53:29 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <yKsck.243608$fB7.217884@en-nntp-06.dc1.easynews.com>
Source record: 4807

<RBorowiak@gmail.com> wrote in message
news:06d46cb5-beff-4f42-b136-526ee11c8473@59g2000hsb.googlegroups.com...
> Guess what you can pick cell phone band on the image
> frequency back in the day.

Given how much time was spent discussing the need for image rejection and the sometimes-elaborate techniques for achieving it, I suspect a lot of my college professors would be incredulous to learn that many receivers do just fine without it.

I've noticed that many Yaesu radios lock out the images of the old AMPS band, which sucks because the image is where there are also 100%-legal-to-receive paging bands. Yaesu lost a sale to Icom over this.

Hopefully the stupid law will be dropped one of these days -- it's not like any large percentage of all cell phone conversations are carried out on an AMPS anymore, and most of the cell phone carriers are quietly shutting down their old AMPS equipment altogether.

---Joel

# 972. Re: Wideband receiver architectures

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-08 08:41:09 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.07.08.08.41.09.792467@localhost.localdomain>
Source record: 4809

On Mon, 07 Jul 2008 06:08:21 +0100, Highland Ham wrote:

>> The one I had used triple conversion superhet. Mircoprocessor
>> controlled.
>> The first IF was like 336Mhz to 10.7Mhz to 455Khz. There was no front
>> end. just direct conversion to the IF. So all the micro had to do was
>> control the oscillator from 336Mhz to 900Mhz using up conversion on
>> the low bands and down conversion on the higher bands. Cell phone band
>> was locked out. Guess what you can pick cell phone band on the image
>> frequency back in the day.
> ========
> Are analog cellphones still used in the USA ?
> I thought by now it is all digital sigs which can not be received with a
> 'normal' receiver , so what's the reason to 'lock out' the cellphone
> frequencies ?
>
> Frank GM0CSZ / KN6WH

The same government logic that made TV broadcast standards
backwards-compatible for over 50 years.

--
Gregg

## 973. parts placement help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-08 19:15:45 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <sbOdnXBBRuRxIe7VnZ2dnUVZ_jidnZ2d@comcast.com>
Source record: 4810

I'm assembling the bits/pieces needed to put together the 40W amp offered up by Mike Kossor in the March/April 1999 QST. Fortunately, the 2 printed circuit boards needed are still offered by FAR. I cannot find a parts placement guide and it is not obvious from either visual inspection of the boards or thorough reading of the article. Anybody have such a thing?? (Wouldn't mind hearing from you Mike if you're out there - nice article)

gary

## 974. Re: parts placement help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-08 19:43:24 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <TrPck.19945$%q.4511@newsfe24.lga>
Source record: 4811

"Gary" <gbelcas@comcast.net> wrote in message
news:sbOdnXBBRuRxIe7VnZ2dnUVZ_jidnZ2d@comcast.com...
> I'm assembling the bits/pieces needed to put together the 40W amp offered
> up by Mike Kossor in the March/April 1999 QST. Fortunately,
> the 2 printed circuit boards needed are still offered by FAR. I cannot
> find a parts placement guide and it is not obvious from either visual
> inspection of the boards or thorough reading of the article. Anybody have
> such a thing?? (Wouldn't mind hearing from you Mike if you're out
> there - nice article)
>
> gary

If you are a member of the ARRL, contact the technical dept.
for clarification.

Pete

## 975. Re: parts placement help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-08 20:11:56 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <gSPck.189773$TT4.128810@attbi_s22>
Source record: 4812

"Gary" <gbelcas@comcast.net> wrote in message
news:sbOdnXBBRuRxIe7VnZ2dnUVZ_jidnZ2d@comcast.com...
> I'm assembling the bits/pieces needed to put together the 40W amp offered
> up by Mike Kossor in the March/April 1999 QST. Fortunately,
> the 2 printed circuit boards needed are still offered by FAR. I cannot
> find a parts placement guide and it is not obvious from either visual
> inspection of the boards or thorough reading of the article. Anybody have
> such a thing?? (Wouldn't mind hearing from you Mike if you're out
> there - nice article)
>
> gary

The League can't help you Gary, but you might try looking up Mike's call sign on QRZ and e-mailing him direct, lots more likely to get an answer than a shotgun approach here. That article is getting a little long in the tooth. You might rather tackle a Communications concepts project, they're a bit easier to deal with even if Granbergs designs are really old.

W4ZCB

## 976. Re: parts placement help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-09 15:22:52 UTC
From: Zack <zlau@arrl.org>
Message-ID: <aaa7981f-4a37-4a4c-88a4-1a75c958b632@m44g2000hsc.googlegroups.com>
Source record: 4813

http://www.arrl.org/notes/hbk-templates/kossor.pdf

Here is the parts placement diagram on the arrl.org web site.

## 977. Re: parts placement help

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-10 03:11:00 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <g56dndsQ069b4OjVnZ2dnUVZ_gidnZ2d@comcast.com>
Source record: 4814

Zack wrote:
> http://www.arrl.org/notes/hbk-templates/kossor.pdf
>
> Here is the parts placement diagram on the arrl.org web site.

Zack - YOU SIR are da' man. Thanks very much. I forgot that placement diagrams, etc are in the back of the handbook (I only copied the chapter pages).

Gary

## 978. 2 phase AC to DC supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 01:09:39 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <839d9e70-7d93-41a9-bf93-867762a9204c@a70g2000hsh.googlegroups.com>
Source record: 4815

I searched but couldn't find anything on:

Using 2 transformers
running the primary of one right off the mains
running the other transformer primary in series
with a large motor run capacitor to phase shift
the primary 90 degrees.
Rectify and filter both secondaries
Diode "OR" the rectified filtered outputs.
This would give me better than double the frequency
As the phase shift would overlap the
120 cycle pulsating DC.

Basicly I have 2 Eico 751 power supplies.
I like to beef up the supply to my Eico 753.

73
N8ZU

# 979. Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 04:31:53 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <XlBdk.22180$NQ5.17167@bignews6.bellsouth.net>
Source record: 4816

Recommendation for RF Prototype "Vector Board" with groundplane needed

I am looking to prototype a couple of small boards containing LINX
TXM-433 LC and LR transmitter modules. These have pads on 0.1" centers
and thus will match the Vector board strips that I am familiar with.
However for this application, I need a ground plane under the module,
and so am looking for a "vector" board with strips, but without plated
through holes and ideally a solid ground plane on the reverse side. I
would prefer plated traces and fiberglass insulation.

These will be simple boards, a TXM-433-LC, a couple of 555 timers and
some discrete components.

Any recommendations?
--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 980. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 05:17:12 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <17a019a1-a79d-4e61-b765-e7d114647573@27g2000hsf.googlegroups.com>
Source record: 4817

On Jul 10, 9:31 pm, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
> Recommendation for RF Prototype "Vector Board" with groundplane needed
>
> I am looking to prototype a couple of small boards containing LINX
> TXM-433 LC and LR transmitter modules. These have pads on 0.1" centers
> and thus will match the Vector board strips that I am familiar with.
> However for this application, I need a ground plane under the module,
> and so am looking for a "vector" board with strips, but without plated
> through holes and ideally a solid ground plane on the reverse side. I
> would prefer plated traces and fiberglass insulation.
>
> These will be simple boards, a TXM-433-LC, a couple of 555 timers and
> some discrete components.
>
> Any recommendations?

Three or four ideas:
o Get what you want made by one of the proto shops. Two-sided boards
aren't outrageous.
o Use a piece of unetched board stock and glue strips with 0.1"-
spaced pads onto it. (Seems like I've seen some places selling strips
like that, maybe even with contact adhesive already on the backs.)
o Etch your own. This is close to trivial if you're already set up
for it, but since you're asking, you probably aren't, so it may not
make much sense.
o Quite useful if there aren't too many pads involved: start with
double-sided copper-clad. Score one side as needed with a utility or
XActo knife, and pull up the unwanted copper. I do this occasionally
for SOIC parts, 0.05" lead spacing; it's very quick for small hacks.

Cheers,
Tom

# 981. Re: 2 phase AC to DC supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 05:43:58 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <0086dcfb-06c7-4879-9680-8c34566adead@z66g2000hsc.googlegroups.com>
Source record: 4818

On Jul 10, 6:09 pm, raypsi <RBorow...@gmail.com> wrote:
> I searched but couldn't find anything on:
>
> Using 2 transformers
> running the primary of one right off the mains
> running the other transformer primary in series
> with a large motor run capacitor to phase shift
> the primary 90 degrees.
> Rectify and filter both secondaries
> Diode "OR" the rectified filtered outputs.
> This would give me better than double the frequency
> As the phase shift would overlap the
> 120 cycle pulsating DC.
>
> Basicly I have 2 Eico 751 power supplies.
> I like to beef up the supply to my Eico 753.
>
> 73
> N8ZU

Suggest you run a simulation of your circuit in something like LTSpice. It probably does not behave like you are thinking it will. Transformers are wound with enough inductance that they look like a moderately high impedance in parallel with the reflected secondary load. But if the secondary is loaded with a full-wave or bridge rectifier into a big capacitance, then current flows only when the secondary voltage is greater than the capacitor voltage (by a diode drop or two). So you end up drawing very little current on the primary side, except when the voltage is near the peak. As a result, you don't get a nice phase-shifted sine on the primary side.

Even if the load looks resistive, the current in the load is not 90 degrees out of phase with the mains voltage; it's just 90 degrees out of phase with whatever voltage drops across the capacitor.

Try some simulations with various loads and series capacitor values, and you'll get a feel for what's going on. If you want, I could send you the simulation file I just hacked together as a starting point.

Cheers,
Tom

# 982. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 15:17:19 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <4cidnQQJG9qd5OrVnZ2dnUVZ_hzinZ2d@posted.cpinternet>
Source record: 4819

K7ITM wrote:

<snip>
I need a ground plane under the module,
>>and so am looking for a "vector" board with strips, but without plated
>>through holes and ideally a solid ground plane on the reverse side.

<snip>
> o Quite useful if there aren't too many pads involved: start with
> double-sided copper-clad. Score one side as needed with a utility or
> XActo knife, and pull up the unwanted copper. I do this occasionally
> for SOIC parts, 0.05" lead spacing; it's very quick for small hacks.

Also, consider using the E.F. Stahler or equiv. mini-mill bits to
drill out pads on the component side; this is a canonical method
of building high-frequency pcb prototypes. You then have large
copper fill on the component side as well as the reverse side plane.

Michael

# 983. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 16:40:39 UTC
From: John Ferrell <johnferrell@sprintmail.com>
Message-ID: <963f74pdihb1et578rol6huid88puohctq@4ax.com>
Source record: 4820

On Fri, 11 Jul 2008 10:17:19 -0500, msg <msg@_cybertheque.org_> wrote:

>E.F. Stahler
E.F. Stahler does not Google well for me. Do you have a url?
John Ferrell W8CCW

# 984. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 17:48:17 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <16eb8622-e216-4cbd-bd0a-77e7ae5027eb@w7g2000hsa.googlegroups.com>
Source record: 4821

On Jul 11, 12:31 am, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
> Recommendation for RF Prototype "Vector Board" with groundplane needed
>
> I am looking to prototype a couple of small boards containing LINX
> TXM-433 LC and LR transmitter modules. These have pads on 0.1" centers
> and thus will match the Vector board strips that I am familiar with.
> However for this application, I need a ground plane under the module,
> and so am looking for a "vector" board with strips, but without plated
> through holes and ideally a solid ground plane on the reverse side. I
> would prefer plated traces and fiberglass insulation.
>
> These will be simple boards, a TXM-433-LC, a couple of 555 timers and
> some discrete components.
>
> Any recommendations?

"Dead bug".

Or, drill holes for all leads, and then use a small milling machine
cutter or just a larger drill bit to remove the copper where you don't
need it.

For prototyping, "dead bug" is way way superior to vectorboards etc,
even with digital parts.

Tim.

# 985. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 19:05:40 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <35OdnR3j5qEYM-rVnZ2dnUVZ_vzinZ2d@posted.cpinternet>
Source record: 4822

Tim Shoppa wrote:

<snip>
> Or, drill holes for all leads, and then use a small milling machine
> cutter or just a larger drill bit to remove the copper where you don't
> need it.

Indeed, this is what the Stahler mini-mill bits do; they create an instant pad wherever it is needed. Stahler may no longer be in business, but perhaps there are other pcb fab mini-mill bits out there. If not, a good machine shop should be able to create a few for commonly used pad sizes, and they will be forever useful (to justify the expense).

Michael

# 986. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-11 19:22:20 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0807111517400.6186@darkstar.example.org>
Source record: 4823

On Fri, 11 Jul 2008, msg wrote:

> Tim Shoppa wrote:
>
> <snip>
>> Or, drill holes for all leads, and then use a small milling machine
>> cutter or just a larger drill bit to remove the copper where you don't
>> need it.
>
> Indeed, this is what the Stahler mini-mill bits do; they create an instant
> pad wherever it is needed. Stahler may no longer be in business, but
> perhaps there are other pcb fab mini-mill bits out there. If not, a
> good machine shop should be able to create a few for commonly used
> pad sizes, and they will be forever useful (to justify the expense).
>
There was something about making one, I'm pretty sure in "Ham Radio",
sometime before 1974 (I can't figure out which article it was from
an accumulated index). I can't remember whether it was a homemade
version of the Stahler tool, or if Stahler came after to provide a
commercial version.

I can't remember the details (and I don't feel like digging through
the magazines to find the article now), but it wasn't much more than a
piece of good steel tubing.

Michael VE2BVW

# 987. Re: kansalaisen karttapaikalla ilmakuvat

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-12 20:13:07 UTC
From: Heikkil&#65533; <klaus@donate.org>
Message-ID: <sfnet15056@19.155.163.43>
Source record: 4824

*(Ydinklingonimme on parhaillaan niin kiivaskiukkusen k&#65533;&#65533;rmessm&#65533;rkkisi&#65533;, ettei juuri vastattavaa l&#65533;ydy)). Toki syyn&#65533; se, ett&#65533; on tullut autonkuormina ydinvastalunta tupasiinsa oikeen &#65533;IJ&#65533;KAADOLLA! Ja hyv&#65533; niin, jahka saamme my&#65533;s SDP:lle viimen ik&#65533;v&#65533;idyn ydinvastaisemman johdon niin ..! Noo toki katellaan miten homma pelitt&#65533;&#65533;, mutta Lipposen ote puolueestaan lent&#65533;&#65533; kuin sirrilintu Katmanduun.. .)

*Vaan hei iloa irti t&#65533;st&#65533;?
*Yleis&#65533;n pyynn&#65533;st&#65533; alan julkaisemaan Suomen ydinaavikoitumisen nykytilastamme kertovaa faktaa.
M.T.28.05-08. Ilmatieteen laitos.

```
PAIKKA SADE mm.

_________________
Helsinki
Kiikkala
Turku 3,5mm
Jormala
Pori
Niinisalo
Tampere
Jokioinen 0,2
Lahti
Utti
```

L.ranta 0,7
Mikkeli
Ilomantsi 1,9
Joensuu 1,3
Kuopio 1,1
Viitasaari 2,7
Jyv&#65533;skyl&#65533; 0,3
&#65533;ht&#65533;ri 2,0
Kauhava 0,3
Vaasa 0,5

Ylivieska 1,0
Kajaani 0,2
Ruukki 0,5
Pudasj&#65533;rvi
Suomussalmi 0,4
Kuusamo 1,5
Rovaniemi 4,4
Pello 1,3
Salla

Sodankyl&#65533; 1,5

Muonio
Kilpisj&#65533;rvi 1,1
Ivalo
Utsjoki

*KESKIARVO= 34kpl/ 0,78mm
Keskisadantavrk. 2mm/5vrk/10mm= 7,8%

J&#65533;l -92,2% satamatta

---

*Niin? Kuka oikeasti edes yll&#65533;ttyi, ett&#65533; j&#65533;lleen kerran lirvahti kev&#65533;tkuukausi tuskin muutaman prosentin normisadannalla? Toki ilmatieteenlaitos ved&#65533;tt&#65533;&#65533; kuun lopulla pokkana, ett&#65533; maailma suorastaan hukkuu vesiin. No se meit&#65533; tietysti vain valheen m&#65533;&#65533;r&#65533;ss&#65533; en&#65533;&#65533; jaksaa huvituttaa. Oikeesti siis kuka tuollaista paskaa edes viittii lukea en&#65533;&#65533;, kun jokainen ymm&#65533;rt&#65533;&#65533;, ett&#65533; ollaan ydinaavikoitumisessa kamelikyydiss&#65533; jo kohti -50% normisadannan huonompaa p&#65533;&#65533;t&#65533;.

*Toki on p&#65533;iv&#65533;n selv&#65533;&#65533;, ettei tilanne parane kuin ajamalla ydinm&#65533;rsk&#65533;t rakettikuormana aurinkoon paskaksi. Meill&#65533; meni t&#65533;ss&#65533; nyt mehil&#65533;iset, matelijat, sammakot, ehk&#65533; jo ensi viikolle taas odotamme mm. ydinlauhteisiin kuolevan meremme syyt&#65533;m&#65533;&#65533; kaspiankampamaneetti-invaasioita. Puumme menee n&#65533;k&#65533;j&#65533;&#65533;n paperienergiatarpeineen ankeroisille muutamassa vuodessa! No yht&#65533; kaikki KUKAAN ei tule sanomaan, ettenk&#65533; jo pitk&#65533;&#65533;n ja hartaasti varoitellut tulevien "punasadeaikojen kauhuista". Nukkukaa hyvin kiivaat ydinklingonimme, pian emme en&#65533;&#65533; uskalla ydinaavikoitumisen edetess&#65533; kohti v&#65533;&#65533;j&#65533;&#65533;m&#65533;t&#65533;nt&#65533; loppukliimaksiaan.(

# 988. Re: 2 phase AC to DC supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-13 02:26:47 UTC
From: N2EY@aol.com
Message-ID: <a10f5187-2ba4-4561-8934-0907a47b04bd@25g2000hsx.googlegroups.com>
Source record: 4825

On Jul 10, 9:09 pm, raypsi <RBorow...@gmail.com> wrote:
> I searched but couldn't find anything on:

There's a reason...
>
> Using 2 transformers
> running the primary of one right off the mains
> running the other transformer primary in series
> with a large motor run capacitor to phase shift
> the primary 90 degrees.

You won't get 90 degrees phase shift because there's a resistive component involved. And as the resistive component changes, the phase shift will change,

> Rectify and filter both secondaries

OK

> Diode "OR" the rectified filtered outputs.

You don't need to do that, the rectifier circuits do it for you.

> This would give me better than double the frequency

No, it wouldn't. At best it would give you double the ripple frequency.

> As the phase shift would overlap the
> 120 cycle pulsating DC.

At best, the pulses of the phase-shifted rectifier would be in the valleys between the pulses of the non-phase-shifted rectifier. So you'd get twice as many pulses - no more.

What you propose doesn't offer any real advantage over a conventional single-phase supply. But it offers a lot of disadvantages such as requiring more than twice as many parts. The phase-shifted supply will have poor regulation and won't carry its share of the load.

> Basicly I have 2 Eico 751 power supplies.
> I like to beef up the supply to my Eico 753.

The best way to do that is to replace the old diodes and filter caps with modern ones. The 751 power supply is more than adequate to power the 753 if it's in good shape.

If your Eico 753 drifts, it's not the power supply. They all drift, so much so that they became known as the "Seven-Drifty-Three" in their time.

Another option if you can't leave well enough alone is to interconnect the power supplies so that one supply runs the low B+, bias and heaters, while the other one provides just the high B+

As K7ITM says, run some simulations and you'll see the reality.

73 de Jim, N2EY.

# 989. Re: 2 phase AC to DC supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-13 10:08:24 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <063661a7-305b-4143-8659-8a5fc17c5251@m44g2000hsc.googlegroups.com>
Source record: 4826

On Jul 12, 10:26 pm, N...@aol.com wrote:
> On Jul 10, 9:09 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > I searched but couldn't find anything on:
>
> There's a reason...
>
>
>
> > Using 2 transformers
> > running the primary of one right off the mains
> > running the other transformer primary in series
> > with a large motor run capacitor to phase shift
> > the primary 90 degrees.
>
> You won't get 90 degrees phase shift because there's a resistive
> component involved. And as the resistive component changes, the phase
> shift will change,
>
> > Rectify and filter both secondaries
>
> OK
>
> > Diode "OR" the rectified filtered outputs.
>
> You don't need to do that, the rectifier circuits do it for you.
>
> > This would give me better than double the frequency
>
> No, it wouldn't. At best it would give you double the ripple
> frequency.
>
> > As the phase shift would overlap the
> > 120 cycle pulsating DC.
>
> At best, the pulses of the phase-shifted rectifier would be in the
> valleys between the pulses of the non-phase-shifted rectifier. So
> you'd get twice as many pulses - no more.
>
> What you propose doesn't offer any real advantage over a conventional
> single-phase supply. But it offers a lot of disadvantages such as
> requiring more than twice as many parts. The phase-shifted supply will
> have poor regulation and won't carry its share of the load.

>
> > Basicly I have 2 Eico 751 power supplies.
> > I like to beef up the supply to my Eico 753.
>
> The best way to do that is to replace the old diodes and filter caps
> with modern ones. The 751 power supply is more than adequate to power
> the 753 if it's in good shape.
>
> If your Eico 753 drifts, it's not the power supply. They all drift, so
> much so that they became known as the "Seven-Drifty-Three" in their
> time.
>
> Another option if you can't leave well enough alone is to interconnect
> the power supplies so that one supply runs the low B+, bias and
> heaters, while the other one provides just the high B+
>
> As K7ITM says, run some simulations and you'll see the reality.
>
> 73 de Jim, N2EY.

Hey Jim:

I was getting my transformers and motors mixed up you can trick
a 3 phase motor into running from single phase. But a transformer
is a passive device. Just another pipe dream.

Yes when it was a new built kit: the Ham I bought it from wrote down
all the voltages in the manual, which I still have.
For the 6DQ6 plate supply he wrote down 790VDC in transmitt.
Maybe that's an errot on his part, I get 750VDC in transmitt and
that's with 125VAC input on the mains, With 110VAC on the mains
the plate voltage goes to 650VDC. I put in new caps and high speed
high surge current 3 amp 1000piv diodes in the supply.

73

N8ZU

## 990. Re: 2 phase AC to DC supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-13 10:18:42 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <9371ba74-d030-47a5-9481-9b42492d6225@d77g2000hsb.googlegroups.com>
Source record: 4827

On Jul 11, 1:43 am, K7ITM <k7...@msn.com> wrote:
> On Jul 10, 6:09 pm, raypsi <RBorow...@gmail.com> wrote:
>
>
>
>
>
> > I searched but couldn't find anything on:
>
> > Using 2 transformers
> >  running the primary of one right off the mains
> > running the other transformer primary in series
> >  with a large motor run capacitor to phase shift
> > the primary 90 degrees.
> > Rectify and filter both secondaries
> > Diode "OR" the rectified filtered outputs.
> > This would give me better than double the frequency
> > As the phase shift would overlap the
> > 120 cycle pulsating DC.
>
> > Basicly I have 2 Eico 751 power supplies.
> > I like to beef up the supply to my Eico 753.
>
> > 73
> > N8ZU
>
> Suggest you run a simulation of your circuit in something like
> LTSpice.  It probably does not behave like you are thinking it will.
> Transformers are wound with enough inductance that they look like a
> moderately high impedance in parallel with the reflected secondary
> load.  But if the secondary is loaded with a full-wave or bridge
> rectifier into a big capacitance, then current flows only when the
> secondary voltage is greater than the capacitor voltage (by a diode
> drop or two).  So you end up drawing very little current on the
> primary side, except when the voltage is near the peak.  As a result,
> you don't get a nice phase-shifted sine on the primary side.
>
> Even if the load looks resistive, the current in the load is not 90
> degrees out of phase with the mains voltage; it's just 90 degrees out
> of phase with whatever voltage drops across the capacitor.
>
> Try some simulations with various loads and series capacitor values,
> and you'll get a feel for what's going on.  If you want, I could send
> you the simulation file I just hacked together as a starting point.

>
> Cheers,
> Tom- Hide quoted text -
>
> - Show quoted text -

Thanks Tom,

Looks like I been just chasing my tail.

I'll have to go with a 3 phase rotory converter.
That's like a 3hp 3 phase motor with phase shift
capacitor plus a run capacitor,
to run a 3 phase 3hp motor from a
single phase.
I then pull 2 phases off the motor
to run my supplys
. They use 3 phase rotory converters
to deliver 3 phase power to equipment that has to
have 3 phase power to run properly.
I seen one running on youtube.

# 991. Re: 2 phase AC to DC supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-13 11:30:25 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <tapj745os6fss7odqtjjoo7j58t08k4k7e@4ax.com>
Source record: 4828

On Sun, 13 Jul 2008 03:18:42 -0700 (PDT), raypsi <RBorowiak@gmail.com>
wrote:

>On Jul 11, 1:43ï¿½am, K7ITM <k7...@msn.com> wrote:
>> On Jul 10, 6:09 pm, raypsi <RBorow...@gmail.com> wrote:
>>
>>
>>
>>
>>
>> > I searched but couldn't find anything on:
>>
>> > Using 2 transformers
>> > ï¿½running the primary of one right off the mains
>> > running the other transformer primary in series
>> > ï¿½with a large motor run capacitor to phase shift
>> > the primary 90 degrees.
>> > Rectify and filter both secondaries
>> > Diode "OR" the rectified filtered outputs.
>> > This would give me better than double the frequency
>> > As the phase shift would overlap the
>> > 120 cycle pulsating DC.
>>
>> > Basicly I have 2 Eico 751 power supplies.
>> > I like to beef up the supply to my Eico 753.
>>
>> > 73
>> > N8ZU
>>
>> Suggest you run a simulation of your circuit in something like
>> LTSpice. ï¿½It probably does not behave like you are thinking it will.
>> Transformers are wound with enough inductance that they look like a
>> moderately high impedance in parallel with the reflected secondary
>> load. ï¿½But if the secondary is loaded with a full-wave or bridge
>> rectifier into a big capacitance, then current flows only when the
>> secondary voltage is greater than the capacitor voltage (by a diode
>> drop or two). ï¿½So you end up drawing very little current on the
>> primary side, except when the voltage is near the peak. ï¿½As a result,
>> you don't get a nice phase-shifted sine on the primary side.
>>
>> Even if the load looks resistive, the current in the load is not 90
>> degrees out of phase with the mains voltage; it's just 90 degrees out
>> of phase with whatever voltage drops across the capacitor.
>>

>> Try some simulations with various loads and series capacitor values,
>> and you'll get a feel for what's going on. ï¿½If you want, I could send
>> you the simulation file I just hacked together as a starting point.
>>
>> Cheers,
>> Tom- Hide quoted text -
>>
>> - Show quoted text -
>
>
>Thanks Tom,
>
>Looks like I been just chasing my tail.
>
>I'll have to go with a 3 phase rotory converter.
>That's like a 3hp 3 phase motor with phase shift
>capacitor plus a run capacitor,
>to run a 3 phase 3hp motor from a
>single phase.
>I then pull 2 phases off the motor
>to run my supplys
>. They use 3 phase rotory converters
>to deliver 3 phase power to equipment that has to
>have 3 phase power to run properly.
>I seen one running on youtube.

Rotary converters in 2008 ????

There are quite a few solid state converters for driving 3 phase
bidirectional motors even from as single phase supply at such low
power levels.

If the original requirement was to generate sufficient power into a
tube transmitter anode supply, I would look into a switching power
supply.

There are of course problems finding high voltage rectifiers for
higher frequencies than 50/60 Hz and the RF noise might be an issue,
but if you can kill the power supply during receive, the RF noise
should not be an issue.

Paul OH3LWR

# 992. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-13 14:39:21 UTC
From: Mike Lucas <w5chr@bellsouth.net>
Message-ID: <2roek.584$t32.32@bignews3.bellsouth.net>
Source record: 4829

> There was something about making one, I'm pretty sure in "Ham Radio",
> sometime before 1974 (I can't figure out which article it was from
> an accumulated index). I can't remember whether it was a homemade
> version of the Stahler tool, or if Stahler came after to provide a
> commercial version.
>
> I can't remember the details (and I don't feel like digging through
> the magazines to find the article now), but it wasn't much more than a
> piece of good steel tubing.
>
> Michael VE2BVW

This may be too late to help the original poster, but the pad-cutter is still available from a couple of sources. The price is WAY out of line, in my hobby-like mentality.
http://www.vectorelect.com/Catpdf/Page%2071.pdf

The above shows the sizes and styles currently produced. A Goggle search on "pad cutter" or "Vector pad cutter" will turn up some commercial sources (Digikey, etc.), but prices are in the $70-80 range.

A link below shows a neat, homemade version of the same idea. www.njqrp.org/islanderpadcutter/index.html . While I haven't made one using these instructions, it appears to be workable.

My employer may purchase one of the Vector P138 cutters, just in case I have to fab up something in the tool and die shop where I hang out sometimes. Of course, I could build one, but.... as long as it's other people's money, why not buy!

Mike W5CHR
Memphis

# 993. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-13 21:03:37 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <IPmdnaVRP7A28OfVnZ2dnUVZ8uqdnZ2d@pipex.net>
Source record: 4830

> A link below shows a neat, homemade version of the same idea.
> www.njqrp.org/islanderpadcutter/index.html . While I haven't made
> one using these instructions, it appears to be workable.
==========
A few years ago I bought a few islander-padcutters through the G-QRP
Club. Excellent for homebrewing with discrete components .
The circular ring removed from the copper clad board is less than 1 mm
wide ,so maximum copper clad area remains ensuring a good ground plane .
Each island can take up 3 component leads
All grounded components are upright soldered into drilled holes , with
the other lead to serve as connecting point for other components.
As an alternative to islands I fit 10 MegOhm resistors upright used as
'insulators' in non-high impedence circuits.

The islands combined with above alternative methods ensure zero to very
short fitted component leads.

Frank GM0CSZ / KN6WH

# 994. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-13 21:52:20 UTC
From: jimmie68@gmail.com
Message-ID: <3f2bddb8-766f-42b8-bf40-deccfeab2e61@b1g2000hsg.googlegroups.com>
Source record: 4831

jimmi...@gmail.com wrote:
> I have a 12volt home made power supply similar to Astron models. I was
> told it could handle 30A. The pass transistors are missing and I have
> some 50 amp NPN darlington transistors on hand I was considering using
> for replacements. Can you think of any reason these could/should not
> be used.
>
> Jimmie

Ok, I went through the amp and it is a cheap made piece of junk probably made to power a CB amp. No over current/vpoltage protection except fuses on both the input an output. It does have a few things going for it. The power transformer is truly massive. I dont doubt it would do 50 amps intermittently. The computer grade capacitors are 120,000uf total. The rectifiers were a couple of 25 amp bridges paralelled. I got rid of that and replaced thm with some leadless rectifiers that came out of some old telco equipment. I think they were part of a 200 amp bridge.

The main problem I have with it is the output transistors get hot, they are well heatsinked. The voltage on the collector of the pass transistors are 22volts. I think this is a little high. Is there a good way to bring this down. The transformer doesnt have any taps. I can put a big VARIAC on the front of of it to get it down but this is not my first choice. I think I remember that Sorenson used to make a power supply that used an SCR or TRIAC circuit on the primary side of the transformer as the control element of their regulator.

Any ideas on how to make this a useful device would be appreciated

Jimmie

## 995. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-14 04:36:44 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <487ad7d5@clear.net.nz>
Source record: 4832

jimmie68@gmail.com wrote:
>
> jimmi...@gmail.com wrote:
>
>>I have a 12volt home made power supply similar to Astron models. I was
>>told it could handle 30A. The pass transistors are missing and I have
>>some 50 amp NPN darlington transistors on hand I was considering using
>>for replacements. Can you think of any reason these could/should not
>>be used.
>>
>>Jimmie
>
>
> Ok, I went through the amp and it is a cheap made piece of junk
> probably made to power a CB amp. No over current/vpoltage protection
> except fuses on both the input an output. It does have a few things
> going for it. The power transformer is truly massive. I dont doubt it
> would do 50 amps intermittently. The computer grade capacitors are
> 120,000uf total. The rectifiers were a couple of 25 amp bridges
> paralelled. I got rid of that and replaced thm with some leadless
> rectifiers that came out of some old telco equipment. I think they
> were part of a 200 amp bridge.
>
> The main problem I have with it is the output transistors get hot,
> they are well heatsinked. The voltage on the collector of the pass
> transistors are 22volts. I think this is a little high. Is there a
> good way to bring this down. The transformer doesnt have any taps. I
> can put a big VARIAC on the front of of it to get it down but this is
> not my first choice. I think I remember that Sorenson used to make a
> power supply that used an SCR or TRIAC circuit on the primary side of
> the transformer as the control element of their regulator.
>
> Any ideas on how to make this a useful device would be appreciated
>
>
> Jimmie
First off Jimmie I would check out the device numbers on the power
transistors. If a search tells you that they are Darlington devices get
rid of them right off!!!
Darlingtons have a minimum collector/emitter voltage of ~1.5 volts or
more so they will get very hot indeed at 30 amps or so.
The ideal would be to use a switching type regulator and power FET's but
even high current (30 amps or more) bipolar devices would be a big
improvement. Check out the figure for Vce(sat) at high currents, tha

lower the better.
BTW if they are not Darlington devices you might have to use external transistors to drive them unless you have a very "grunty" zener and waste a bit of power to give them a reference base voltage.
Cliff Wright.ZL1BDA

# 996. Re: Fotoneista ja energiasta

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-14 05:11:18 UTC
From: Viljo Wagner <viljo@nonc.org>
Message-ID: <a.se64k.16587$_03.11155@e0x3ll3ll25.dlsa.cybercity.dk>
Source record: 4833

T&T.Varavoima [Jarmo Sepp�l�, 04.06.2008]
"Uusi ydinvoimala vaatii nopeaa h�iri�reservi�
Kantaverkkoyhti� Fingrid k�ynnist�� varavoimakapasiteetin rakentamisen
yva-menettelyn loppukes�st�. Fingrid varautuu l�hivuosina lis��m��n nopeaa
h�iri�reservi� 100-400 megawatilla. "

*��rimm�isen mielenkiintoinen tieto muuten! T�h�n asti kun ydinvoiman
pakollista +10% alati py�riv�n tukis��t�voiman olemassaoloa
IAEA/USA-lains��d�nn�ss�mme kun on tiedotusvuotona varjeltu julkisuudelta
kuin kruunun jalokive�. Mutta kas, KAS n�in vaan Fennovoimalta se MY�S
vaaditaan! Ja huomatkaa nyt m��r�! Kerroin, ett� JATKUVAA s��t�apuvoimaa
menee 10% ensinn� hukkaan kiinailmi�estoreserveihin ja sitten toinen mokoma
p��lle aputukivoimana huikein lis�kustannuksin. Eli t�st� oletetun 2 000MW
voimalan 10% kiinailmi�nestoon ja j�lkilauhdepumppujen osasekunttien
starttivarmistukseksi alati p��ll� py�riv�n�, ennen kuin ydinvoima edes lain
mukaan p��stet��n verkkoon riehumaan menee tuosta siis 200MW. Mutta koska
tarvitaan my�s ydintyyliin varmennuksen varmennusta apulis�� p��lle niin
lurpahtaa my�s toiset 10% tuosta vaan. Eli TISMALEEN ydinvoima t�ll�
faktauksella tarvitsee haaskaavaa lis�voimaa aina ydinalan ammattilaisena
kertomani 10+10%= 20%!! Siis JOKA ydinvoimalamme vaatii tylysti todennetusti
suomeksi liki Loviisan ydinvoimalan pelk�ksi h�t�apukyytipojakseen! Ja
meinaan miljardeja ydintukiaisiin palaa meritt�in!!

*Maailmassa ei toki sitten MIK��N muuu energiamuoto kyll� vaadi vastaavaa
reservi�. Ei edes siit� syytt� ydinvoimin aiemmin parjattu tuulivoima.
Muilla kun ei s�teilyn j�lkil�mp� r�j�hd� ydinpommina muutamissa minuuteissa
ydintyyliin. Esim. vesivoimalalle riitt�� pelkk� maan vetovoimalla toimiva
alasajoventtiilin turva, ei MIT��N muuta. Kuten Tanskasta tied�mme siel� ei
moisiin tuulis��t�voimiin ole ollut tarvetta. Vaikka L�nsi-Tanskan s�hk�st�
on tuulivoimalla jo huikeat 50%. N�ink� alkaa vaan ydinalan valheet tippua
julkisuuteen kuin m�t� omena puusta!? Eli nyt vaan Fennovoiman ydinherroilta
tiedotusv�lineemme tivaamaan, ett� miksi t�m� ydinvoimaan elimellisesti
kuuluneet s��t�voiman lis�kustannusfaktat on aina t�h�n asti vuosikymmenet
megakustannuspakkoina pimitetty?!

*Tilanne tulee sik�li hauskempaan suuntaan kun esim. TVO:n kaasuvoimaloiden
n.100MW kevytdieselin P�IV�KULUTUS heiluu 1 000m3/vrk. L�p�n euron
litrahinnalla korkkaa ekstemporee miljoonan/vrk!! Ja t�m� tosiaan yll�
enemm�n kuin triplettin�.. ..Hmm , todella mielenkiintoinen t�h�n asti
tarkoin salattu ydinalan lis�megakulu taas paljastettuna!! Ei taida olla
"sattuneesti" ydinalalle oikein mieluisaa kertoilla n�ist� reaaleistaan!?
Jaa niin tosiaan esim. TVO:n lis�kaasuturbinien pakoputkissa ei laki salli
sitten MIT��N filtteri starttihidasteenaan, eli pelkk aukko syyt�m��n
maailman t�yteen pienhiukkasia ja CO2 sellaisella ennenn�kem�tt�m�n vihan

kiivaudella, ett&#65533; j&#65533;&#65533; siin&#65533; ydinp&#65533;&#65533;st&#65533;kinti&#65533;mme CO2 osalta my&#65533;s heitt&#65533;m&#65533;ll&#65533;
rankasti miinukselle hetkess&#65533;!

# 997. Re: Recommendation for RF Prototype "Vector Board" with groundplane needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-14 10:18:06 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <95c5c664-b535-4388-8b05-6c790b7f62cc@s50g2000hsb.googlegroups.com>
Source record: 4834

On 13 Jul, 22:03, Highland Ham <abcgm0csz.kn6wh...@dsl.pipex.com>
wrote:
> >     A link below shows a neat, homemade version of the same idea.
> >  www.njqrp.org/islanderpadcutter/index.html. While I haven't made
> > one using these instructions, it appears to be workable.
>
> ========================
> A few years ago I bought a few islander-padcutters through the G-QRP
> Club.   Excellent for homebrewing with discrete components .
> The circular ring removed from the copper clad board is less than  1 mm
> wide ,so maximum copper clad area remains ensuring a good ground plane .
> Each island can take up 3 component leads
> All grounded components are upright soldered into drilled holes , with
> the other lead to serve as connecting point for other components.
> As an alternative to islands I fit 10 MegOhm resistors upright used as
> 'insulators' in non-high impedence circuits.
>
> The islands combined with above alternative methods ensure zero to very
> short fitted component leads.
>
> Frank   GM0CSZ / KN6WH

Farnell used to sell isolated pad cutters. I've got a couple and they
weren't expensive. They might still stock them.

Leon

# 998. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-14 11:04:30 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <NsadnWhmaIqzq-bVnZ2dnUVZ8sninZ2d@pipex.net>
Source record: 4835

jimmie68@gmail.com wrote:
> The main problem I have with it is the output transistors get hot,
> they are well heatsinked. The voltage on the collector of the pass
> transistors are 22volts. I think this is a little high. Is there a
> good way to bring this down. The transformer doesnt have any taps. I
> can put a big VARIAC on the front of of it to get it down but this is
> not my first choice. I think I remember that Sorenson used to make a
> power supply that used an SCR or TRIAC circuit on the primary side of
> the transformer as the control element of their regulator.
>
> Any ideas on how to make this a useful device would be appreciated
==========

There is an excellent article on SCR controlled power supplies in ARRL mag QEX -July/Aug 1999 ,pages 50 - 55.
"A regulated 2400 V Power Supply by VE6AXW"
It has a 'soft start' facility and voltage control is very good (voltage drops only a few volts between zero and 1 Ampere load conditions (and that at 2400V)).
The SCR or triac type of control can obviously be applied to any power supply unit . It can hence also be used for a controlled (soft start) filament voltage for expensive high power valves (tubes)

In order not to get a 'dirty' 115/230 V AC system on the premises ,because of the SCRs /triac ,it might be necessary to include an 'upstream' AC filter.

Frank GM0CSZ / KN6WH

## 999. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-14 23:44:02 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-147CAC.19440214072008@nntp.aioe.org>
Source record: 4836

In article <487ad7d5@clear.net.nz>,
cliff wright <c.c.wright@paradise.net.nz> wrote:

> If a search tells you that they are Darlington devices get
> rid of them right off!!!
> Darlingtons have a minimum collector/emitter voltage of ~1.5 volts or
> more so they will get very hot indeed at 30 amps or so.

Cliff-

Are you sure that applies to Astron-type power supplies? The ones I'm familiar with do not operate with the pass transistors near saturation.

Perhaps a Darlington device is not the best choice for some other reason, but I would think a pair of 50 Amp devices could handle 15 Amps each (30 Amps total) with sufficient cooling, if they are rated for at least 120 watts each. (I assume 22 volts input, 14 volts output, 8 * 15 = 120 Watts per device.)

Fred
K4DII

# 1000. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-15 02:20:21 UTC
From: Dave M <masondg4xx4@cxxomcast.net>
Message-ID: <r0rn74ph4o98uveid8mpp5hhbhs2gqjgnh@4ax.com>
Source record: 4837

On Mon, 14 Jul 2008 19:44:02 -0400, Fred McKenzie <fmmck@aol.com> wrote:

>In article <487ad7d5@clear.net.nz>,
> cliff wright <c.c.wright@paradise.net.nz> wrote:
>
>> If a search tells you that they are Darlington devices get
>> rid of them right off!!!
>> Darlingtons have a minimum collector/emitter voltage of ~1.5 volts or
>> more so they will get very hot indeed at 30 amps or so.
>
>Cliff-
>
>Are you sure that applies to Astron-type power supplies? The ones I'm
>familiar with do not operate with the pass transistors near saturation.
>
>Perhaps a Darlington device is not the best choice for some other
>reason, but I would think a pair of 50 Amp devices could handle 15 Amps
>each (30 Amps total) with sufficient cooling, if they are rated for at
>least 120 watts each. (I assume 22 volts input, 14 volts output, 8 * 15
>= 120 Watts per device.)
>
>Fred
>K4DII

---

Fred is absolutely correct in saying that the pass transistors in most linear regulators such as those in the Astron supplies do not operate as saturated elements. Therefore, the higher CE saturation voltage of a darlington has no bearing in this discussion. On another point, the 120 watts per device that Fred mentions is at a case temperature of 25 deg, C. Heatsinks of reasonable size can't dissipate that much power and keep the case temperature at 25C.

I have a few talking points that nobody has touched on directly.

If the regulator was designed to use normal (non-darlington) pass transistors, and you substitute darlingtons in their place, some very bad things could (will) happen.

The output of the regulator will likely try to go to its full input voltage rail (because of the high gain of the darlingtons). The feedback loop in the regulator will try to bring it back down to the set output voltage. It probably can't because the gain of the darlingtons is too high, and the output stays banged against the input rail (22V).

Even if the regulator loop can bring it down, the control loop isn't compensated correctly for the high gain of the pass elements, and the regulator will oscillate wildly. Both conditions are catastrophic for a power supply.

Another point that I would like to mention is that of a transistor's SOA or Safe Operating Area. There are two graphs in the datasheet for the transistors. The SOA graph shows the safe combinations of collector current and collector-emitter voltage AT A CASE TEMPERATURE OF 25 DEG C. The power derating graph shows how much power the transistor can safely dissipate at a given temperature.

You MUST use thesse graphs when designing a pass element. They will help you choose the appropriate transistor types and will tell you how many transistors you have to use in the pass element to safely supply the design load current.

In almost all cases, the current through each transistor in the pass element is limited to much less than the absolute maximum collector current spec. Thus, although a 2N3771 transistor has an absolute max Ic of 30A, it won't be able to pass that amount of current at any value of CE voltage. The datasheet gives the conditions for that current; the higher the collector current, the lower the CE voltage allowed.

Sorry for being long-winded, but it's not a 2-sentence discussion.

Cheers!!!
==========

Dave M
Remove all of the Xs from the reply address Dave M <masondg4xx4@cxxomcast.net>
Never take a laxative and a sleeping pill at the same time!!

# 1001. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-15 06:27:17 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <edfo74tc44cmts377lqvg4dbaca3j28r15@4ax.com>
Source record: 4838

On Mon, 14 Jul 2008 22:20:21 -0400, Dave M <masondg4xx4@cxxomcast.net>
wrote:

>On Mon, 14 Jul 2008 19:44:02 -0400, Fred McKenzie <fmmck@aol.com> wrote:
>
>>In article <487ad7d5@clear.net.nz>,
>> cliff wright <c.c.wright@paradise.net.nz> wrote:
>>
>>> If a search tells you that they are Darlington devices get
>>> rid of them right off!!!
>>> Darlingtons have a minimum collector/emitter voltage of ~1.5 volts or
>>> more so they will get very hot indeed at 30 amps or so.
>>
>>Cliff-
>>
>>Are you sure that applies to Astron-type power supplies? The ones I'm
>>familiar with do not operate with the pass transistors near saturation.

Are you sure about that ? Have you looked at the capacitor voltage
with an oscilloscope with full nominal current and minimum mains
voltage ? The goal should be that the capacitor voltage just before
the rectifier starts to conduct is only slightly above the output
voltage.

>Another point that I would like to mention is that of a transistor's SOA or Safe
>Operating Area. There are two graphs in the datasheet for the transistors. The
>SOA graph shows the safe combinations of collector current and collector-emitter
>voltage AT A CASE TEMPERATURE OF 25 DEG C. The power derating graph shows how
>much power the transistor can safely dissipate at a given temperature.

The SOA is important especially in the short circuit current limiting
case, when both the current and voltage across the transistor is high.
A fold-back current limiting solves this problem.

The SOA derating usually starts above 5 V, so in a properly designed
power supply the input-output voltage difference should be less than
that, so in normal operation, the SOA is not very critical.

Paul OH3LWR

# 1002. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-15 12:23:30 UTC
From: jimmie68@gmail.com
Message-ID: <2b063955-fd09-408f-82dc-60415fba4e6a@34g2000hsh.googlegroups.com>
Source record: 4839

> happen.
>
> The output of the regulator will likely try to go to its full input voltage rail
> (because of the high gain of the darlingtons). The feedback loop in the
> regulator will try to bring it back down to the set output voltage. It probably
> can't because the gain of the darlingtons is too high, and the output stays
> banged against the input rail (22V).

I dont understand what you mean by this. The voltage gain of the darlington transistors is less than unity in this case since they are being used as emitter followers.

I am dropping 8.5 volts at 20 amps or 170 watts is being dissipated by the transistors. This may not be a real problem. I know my commercial power supply of similar size only provides about 18 volts to the collector of the pass transistors and this would result in about half as much power being wasted. What voltage would you normally expect at the the collector of the pass transistors. I have also thought that maybe I dont have that much of a real problem since I doubt if the power supply will ever be put under the same demands as it does working into my load bank. Also I think I should add two more transistors in paralell with the two I have. I think this would distribute the heat better over my heat sink and have less localized heating.

I dont think the size of my heatsink is a problem, it is probably overkill. it is a 8in chimney type heat sink( i think that what you call them) 8x8x10 inches finned inside and out. The transistor body is mount on the outside withe the wires going down the inside of the chimney. The end of the chimney is designed to take a muffin fan.

Jimmie

# 1003. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-15 17:24:48 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-87BD6A.13244815072008@nntp.aioe.org>
Source record: 4840

In article
<2b063955-fd09-408f-82dc-60415fba4e6a@34g2000hsh.googlegroups.com>,
jimmie68@gmail.com wrote:

> The voltage gain of the
> darlington transistors is less than unity in this case since they are
> being used as emitter followers.

Jimmie-

I agree. Being the devil's advocate, a circuit can have parasitic elements you don't think about, and can oscillate in a different mode than it normally operates in. If you were using it to power a transmitter with a poor antenna, there might be some RF energy entering the base-emitter junction. The energy is rectified and shifts the bias conditions. DC output voltage is changed, resulting in a change in the level of the rectified RF, resulting in a change in the DC output voltage, et cetera. Normally you would disregard this until/unless you actually observe a problem.

I agree with Paul, that you want the capacitor voltage to be relatively close to the output voltage. But there is a limit where hum starts to appear in the output, and regulation is reduced. In the case of the Astron RS-20 circuit diagram, the main capacitor voltage is listed as 23.0 for no load and 18.0 under load, for 13.8 VDC no load output and 13.7 VDC under load.

I worked on a friend's RS-20. After repair, I ran it for several hours at 8 Amps load. This is within the continuous power rating, but the heat sink really got hot!

Fred
K4DII

## 1004. 30s "homebrew" ham receiver project

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-15 21:16:14 UTC
From: cloughbrengle@gmail.com
Message-ID: <f2ee3eb1-6339-4385-a805-68ab284a9f77@z66g2000hsc.googlegroups.com>
Source record: 4841

I thought you guys might be interested in my current restoration of a
30s "homebrew"
receiver. I put homebrew in quotes because I'm not 100% sure it's not
commercial built
or maybe a prototype.
Here's a like to the first of the project web pages.
http://radioheaven.homestead.com/HomeBrewRX.html

73, W4Ron

# 1005. ** FLEA at MIT ** Sunday July 20th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-15 23:19:26 UTC
From: w1gsl@mit.edu
Message-ID: <487d307e$0$313$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 4842
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.info

This coming Sunday....
the next .... FLEA at MIT

**********
**********

Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

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so come rain or shine or super heat the Flea is on !!!

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

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The flea will be held on Albany between Mass Ave and
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Cambridge MA 02139
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**********
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
**********

# 1006. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-16 02:06:13 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <c66571fc-6e79-4dc6-a05e-e203ba053b4b@79g2000hsk.googlegroups.com>
Source record: 4843

The voltage gain of darlingtons is less that unity as a emitter
follower. but not the current gain. The base current is like 20 ma.
and the collector is like 20 amps that's a gain of 100. A good
regulator like a LM723 can regulate that easy. If the gain ain't there
in the darlingtons you need a drive transistor.

I use a 0.1 ohm 50watt resistor series with the output, that gives me
an extra 2 volt drop that isn't across the transistor and keeps 40
watts from heating up the output. You still lose 40 watts. It just
goes up in the resistor. The 0.1 ohm 50 watt is only good for like 22
amps.

Put a fan on the heatsink. 170 watts will get hot all the time.
I put a computer power supply fan on my supply, the output stays alot
cooler.
Once the current drops the fan cools it really fast.

You have a high transformer voltage because it's a 50 amp supply and
you are running it at only 20 amps.

On Jul 15, 8:23 am, jimmi...@gmail.com wrote:
> > happen.
>
> > The output of the regulator will likely try to go to its full input voltage rail
> > (because of the high gain of the darlingtons).  The feedback loop in the
> > regulator will try to bring it back down to the set output voltage.  It probably
> > can't because the gain of the darlingtons is too high, and the output stays
> > banged against the input rail (22V).
>
> I dont understand what you mean by this. The voltage gain of the
> darlington transistors is less than unity in this case since they are
> being used as emitter followers.
>
> I am dropping 8.5 volts at 20 amps or 170 watts is being dissipated by
> the transistors. This may not be a real problem. I know my commercial
> power supply of similar size only provides about 18 volts to the
> collector of the pass transistors and this  would result in about half
> as much power being wasted. What voltage would you normally expect at
> the the collector of the pass transistors. I have also thought that
> maybe I dont have that much of a real problem since I doubt if the
> power supply will ever be put under the same demands as it does
> working into my load bank. Also I think I should add two more
> transistors in paralell with the two I have. I think this would
> distribute the heat better over my heat sink and have less localized
> heating.

>
> I dont think the size of my heatsink is a problem, it is probably
> overkill. it is a 8in chimney type heat sink( i think that what you
> call them) 8x8x10 inches finned inside and out. The transistor body is
> mount on the outside  withe the wires going down the inside of the
> chimney. The end of the chimney is designed to take a muffin fan.
>
> Jimmie

# 1007. CLICK HERE FOR DOWNLOAD SONGS, WALLPAPER, AND MANY MORE.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-16 02:34:47 UTC
From: Free download mp3 songs <priyamishra4u@gmail.com>
Message-ID: <f1b905f3-fe80-4f95-8022-51c04761d818@m36g2000hse.googlegroups.com>
Source record: 4844

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http://groups.google.com/group/rec.music.indian.misc/browse_thread/thread/23ef7b6d50b2ba69

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Panjabi Songs - http://downloadfreemp3songs.50webs.com/panjabisongs.html

Tamil songs - http://downloadfreemp3songs.50webs.com/tamilsongs.html

# 1008. cigarettes:mayfair,regal,club,benson and hedges,lambert and butler,superkings

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-16 08:28:07 UTC
From: brandedsite <brandnewcheap@163.com>
Message-ID: <c5bb43c5-c5f1-436d-a812-762f614a48ce@w7g2000hsa.googlegroups.com>
Source record: 4845

original benson and hedges,benson & hedges,b&h,Master
Case,Marlboro,cigarette tobacco shipping to uk,Duty Free Suppliers In
China Wanted Marlboro|555|Belomorkanal|Bond|Camel|Chesterfield|Dallas|
Davidoff|Dunhill|Epique|Esse|Gauloises|Karelia|Kent|L&M|LuckyStrike|
Magna|Marlboro|MildSeven|MonteC|rlo|More|Muratti|PallMall|Parliament|
PeterI|R1|Rothmans|RussianStyle|Salem|Sobranie|Sovereign|Viceroy|
VirginiaSlims|Vogue|West|Winston|SpecialOffer
processed tobacco of all grades, for European market. (www brandedsite
com)

cigarettes:mayfair,regal,club,benson and hedges,lambert and
butler,superkings,richmonds superkings,tobacco:golden
virginia,drum,wilsons (www[dot]brandedsite[dot]com)

Finest Cigartte from Europe uk's no.1 brand cigatettes king size l&b
clebration park uk duty paid.Hookah (www[dot]brandedsite[dot]com)
kinds of cigarettes Light and Mid and Normal (www brandedsite com)
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are you looking for suppliers of high quality shisha tobacco
interested in exporting to Poland, to feed the developing popularity
of shisha smoking in the country. So far only low quality producers
are present on the market, and only small batches of high quality
tobacco is being brought to the country by individuals who travel
abroad or order from internet stores in other countries for personal
use, yet the demand for higher quality tobacco is very high on all
community forums, as well as among hookah bar owners.
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2: Good price and quality (www[dot]brandedsite[dot]com)

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only welcome serious buyer from all over the world to contact for more
info!!!

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www brandedsite com

# 1009. Re: Power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-16 14:18:41 UTC
From: jimmie68@gmail.com
Message-ID: <a18501a7-7b41-4e99-b08c-e85aad826ad1@f36g2000hsa.googlegroups.com>
Source record: 4846

raypsi wrote:
> The voltage gain of darlingtons is less that unity as a emitter
> follower. but not the current gain. The base current is like 20 ma.
> and the collector is like 20 amps that's a gain of 100. A good
> regulator like a LM723 can regulate that easy. If the gain ain't there
> in the darlingtons you need a drive transistor.

Huh, I thought the 723 was a voltage regulator, not current. Im sorry
but what you are saying just doent make sense to me. It is my
understanding that the greater current gain of the Darlington
transistors is just going result in the 723 seeing a lighter load wich
would be godd for the 723. Perhaps that could be a problem if it were
light enough, maybe this would result in the 723 becoming unstable but
this does not appear to ba a problem with light loads, no loads or
heavy loads.
When I first started working on the power supply there was one tiny
problem using the Darlingtons that was more a result of the poor
design of the origonal circuit than anything else. The the origonal
circuit monitored the ouput voltage at the base of the pass
transistors. Because of the 1.6 base to emiter drop of the darlingtons
the output voltage was a little low. After moving the pick off point
to the emitter I no longer had this problem.
>
> I use a 0.1 ohm 50watt resistor series with the output, that gives me
> an extra 2 volt drop that isn't across the transistor and keeps 40
> watts from heating up the output. You still lose 40 watts. It just
> goes up in the resistor. The 0.1 ohm 50 watt is only good for like 22
> amps.
>
> Put a fan on the heatsink. 170 watts will get hot all the time.
> I put a computer power supply fan on my supply, the output stays alot
> cooler.
> Once the current drops the fan cools it really fast.
>
> You have a high transformer voltage because it's a 50 amp supply and
> you are running it at only 20 amps.
>
> On Jul 15, 8:23 am, jimmi...@gmail.com wrote:
> > > happen.
> >
> > > The output of the regulator will likely try to go to its full input voltage rail
> > > (because of the high gain of the darlingtons). The feedback loop in the
> > > regulator will try to bring it back down to the set output voltage. It probably
> > > can't because the gain of the darlingtons is too high, and the output stays

> > > banged against the input rail (22V).
> >
> > I dont understand what you mean by this. The voltage gain of the
> > darlington transistors is less than unity in this case since they are
> > being used as emitter followers.
> >
> > I am dropping 8.5 volts at 20 amps or 170 watts is being dissipated by
> > the transistors. This may not be a real problem. I know my commercial
> > power supply of similar size only provides about 18 volts to the
> > collector of the pass transistors and this would result in about half
> > as much power being wasted. What voltage would you normally expect at
> > the the collector of the pass transistors. I have also thought that
> > maybe I dont have that much of a real problem since I doubt if the
> > power supply will ever be put under the same demands as it does
> > working into my load bank. Also I think I should add two more
> > transistors in paralell with the two I have. I think this would
> > distribute the heat better over my heat sink and have less localized
> > heating.
> >
> > I dont think the size of my heatsink is a problem, it is probably
> > overkill. it is a 8in chimney type heat sink( i think that what you
> > call them) 8x8x10 inches finned inside and out. The transistor body is
> > mount on the outside withe the wires going down the inside of the
> > chimney. The end of the chimney is designed to take a muffin fan.
> >
> > Jimmie

I added two more pass transistors and this seems to have helped a lot.
I was once given a rule of thumb that a TO3 transistor should never
have to handle more than about 7 amps continously. I was pushing them
to 10amps. Even though they are rated at 50A they will not handle
anywhere near that without extreme measures to keep them cool.
Interesting note, at 40amps they dont get is hot with 4 transistors as
it did with 20amps with 2 transistors. I didnt check yet but I suspect
that is because the voltage at the ouput of the filter rectifier is
beginning to drop off a bit. If I continue to try to use this power
supply I would probably increase the number of pass transistors to 8.
This would be easy to do as the existing heatsink is already prepared
for it.

Thanks much for the advice
Jimmie

## 1010. Help finding a couple of 790Mhz filters...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-16 18:17:16 UTC
From: ampsbasestation@yahoo.com
Message-ID: <97464dd7-1bd6-4e31-9bb8-08588cc2371e@l42g2000hsc.googlegroups.com>
Source record: 4847

Hi All,

I am building another one of my toys http://tinyurl.com/6x3a9m and
need a couple more two pole Gigafil thro hole filters centered around
785Mhz - 795Mhz, I need this for the RX LO for Base Station receiver.
The last one was scavenged from an old AMPS phone, see http://tinyurl.com/626k4c.

Yes, I know that this isn't quite ham radio, but it is experimentation
just the same...

If anyone can help with either parts in the junk drawers, or know of a
supplier I will be most grateful. SMT parts will work at a pinch.

This is a non-commercial project.

Thanks,

Mark

# 1011. Re: CTCSS For FDK Multi 7

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-17 11:03:18 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <5db92ba7-e2aa-46ef-9d04-f8234fc9900f@s50g2000hsb.googlegroups.com>
Source record: 4848

On Jul 6, 6:57 pm, vk3f...@gmail.com wrote:
> Our local repeater has just started to use CTCSS and my poor old 2m
> Rig has no CTCSS.
> Has anyone got a simple circuit for this, also i think i will need a
> circuit diargam for the radio. It is an old FDK Multi7, crystal rig.
>
> Any help or suggestions would be great!
>
> Andre
>
> VK3FASW

Hi Andre,
there are any number of circuits out there on the web - Google is your
friend. I did this a while ago, but cant find the URL on my ever more
congested hard drive....lots using PICs, which is fine, but some used
a 555 for a spot frequency.

Andrew VK3BFA.

## 1012. Measure Signal Generator with Oscilloscope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-17 18:50:46 UTC
From: joshhemming@fastmail.fm
Message-ID: <260b3c91-6ee2-43f2-8034-e3647f03cb10@m36g2000hse.googlegroups.com>
Source record: 4849

I bought an old Heathkit IG-42 "Laboratory Generator" at a flea
market
the other day. It powers up OK but I don't have anything to test it
with except a TEK 465 O-scope. I looked for an output with the scope
but couldn't find anything. I know the scope is working because its
1K hz calibration signal looks fine.

The generator dial goes from 100 KC to 30 MC. Is this too high a
frequency to be monitored with a 465?

# 1013. Re: Measure Signal Generator with Oscilloscope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-17 19:07:05 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <wLMfk.542$eE4.61@newsfe09.iad>
Source record: 4850

<joshhemming@fastmail.fm> wrote in message
news:260b3c91-6ee2-43f2-8034-e3647f03cb10@m36g2000hse.googlegroups.com...

> The generator dial goes from 100 KC to 30 MC. Is this too high a
> frequency to be monitored with a 465?

no

..

# 1014. Re: Measure Signal Generator with Oscilloscope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-17 19:13:33 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9ADE90B7BD6F0VeebleFetzer@127.0.0.1>
Source record: 4751

joshhemming@fastmail.fm () wrote in
news:260b3c91-6ee2-43f2-8034-e3647f03cb10@m36g2000hse.googlegroups.com:

> I know the scope is working because its 1K hz calibration signal
> looks fine.

Well, you know that the path from the calibrator through the scope is
OK, but probably nothing about the external inputs.

> The generator dial goes from 100 KC to 30 MC. Is this too high a
> frequency to be monitored with a 465?

The 465's specs were DC to 100MHz.

--
Bert Hyman | St. Paul, MN | bert@iphouse.com

# 1015. Re: Measure Signal Generator with Oscilloscope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-17 21:34:45 UTC
From: Sven Lundbech <oz7s@hotmail.com>
Message-ID: <487fbaf6$0$15882$edfadb0f@dtext01.news.tele.dk>
Source record: 4752

<joshhemming@fastmail.fm> skrev i en meddelelse
news:260b3c91-6ee2-43f2-8034-e3647f03cb10@m36g2000hse.googlegroups.com...
>I bought an old Heathkit IG-42 "Laboratory Generator" at a flea
> market
> the other day. It powers up OK but I don't have anything to test it
> with except a TEK 465 O-scope. I looked for an output with the scope
> but couldn't find anything. I know the scope is working because its
> 1K hz calibration signal looks fine.
>
> The generator dial goes from 100 KC to 30 MC. Is this too high a
> frequency to be monitored with a 465?
>

- the '465 is ok for a rough testing, but you may have turned the IG-42
output level way down?

Remember, the signal level output level can be adjusted from a max of 100
millivolts down to the microvolts level - and your 'scope will not show much
if the signal level is belov approx. a few millivolts.

So, crank up the level to the max of 100 millivolts and do the measurements.

Does this help?

vy 73
OZ7S Sven

# 1016. Re: Measure Signal Generator with Oscilloscope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-17 23:25:17 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0807171921370.15052@darkstar.example.org>
Source record: 4753

On Thu, 17 Jul 2008, Bert Hyman wrote:

> joshhemming@fastmail.fm () wrote in
> news:260b3c91-6ee2-43f2-8034-e3647f03cb10@m36g2000hse.googlegroups.com:
>
>> I know the scope is working because its 1K hz calibration signal
>> looks fine.
>
> Well, you know that the path from the calibrator through the scope is
> OK, but probably nothing about the external inputs.
>
The only scope calibrators I've seen have been a jack or something on the front panel of the scope, so when you touch the probe to it, you take into consideration the scope probe, the cable to the scope and the input circuitry. The "scope calibrator" is as useful for a quick check like this as an potential calibrating use.

>> The generator dial goes from 100 KC to 30 MC. Is this too high a
>> frequency to be monitored with a 465?
>
> The 465's specs were DC to 100MHz.
>
And as someone pointed out when he asked elsewhere, a digitally tuned radio will be useful. Even an analog, since you can at least tell if the generator is putting out a signal by tuning the radio and the generator to the same frequency, and adjusting one slightly if there's no output (to ensure one isn't off-frequency). A shortwave radio has the advantage over the average table radio since it can tune higher in frequency. When I had an SP-600, it was about the best piece of test equipment I had.

Michael VE2BVW

# 1017. Re: Measure Signal Generator with Oscilloscope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-18 11:58:32 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <4880855a$1@clear.net.nz>
Source record: 4754

Michael Black wrote:
> On Thu, 17 Jul 2008, Bert Hyman wrote:
>
>> joshhemming@fastmail.fm () wrote in
>> news:260b3c91-6ee2-43f2-8034-e3647f03cb10@m36g2000hse.googlegroups.com:
>>
>>> I know the scope is working because its 1K hz calibration signal
>>> looks fine.
>>
>>
>> Well, you know that the path from the calibrator through the scope is
>> OK, but probably nothing about the external inputs.
>>
> The only scope calibrators I've seen have been a jack or something on the
> front panel of the scope, so when you touch the probe to it, you take
> into consideration the scope probe, the cable to the scope and the input
> circuitry. The "scope calibrator" is as useful for a quick check like
> this as an potential calibrating use.
>
>
>>> The generator dial goes from 100 KC to 30 MC. Is this too high a
>>> frequency to be monitored with a 465?
>>
>>
>> The 465's specs were DC to 100MHz.
>>
> And as someone pointed out when he asked elsewhere, a digitally tuned
> radio will be useful. Even an analog, since you can at least tell if
> the generator is putting out a signal by tuning the radio and the
> generator to the same frequency, and adjusting one slightly if there's
> no output (to ensure one isn't off-frequency). A shortwave radio has
> the advantage over the average table radio since it can tune higher in
> frequency. When I had an SP-600, it was about the best piece of test
> equipment I had.
>
> Michael VE2BVW
Well you should see the signal fine on a 100MHz 465.
I have a very similar generator and I was just using it today to set up
some filters with no problems at ~7.8 Mhz, using a 60Mhz Telequipment scope.
Does that model Heath sig Gen have an output meter? Make sure the coarse
attenuator switch and fine level adjustments are fully clockwise. You
should get more than full scale on the meter when switched to Rf level.
If thats Ok then you should get around 100mV or more at the scope input.
Are you perhaps using a /100 probe, there are a few around. Most scope

probes are x1 or /10 switched though.
If the scope is indeed working and your trigger is set to auto with the
Y input at ~50Mv/div you should get plenty of signal at all of the
generators frequency range. If no display then you may have trigger
problems at higher freqencies with the scope.
Cliff Wright ZL1BDA

# 1018. Re: Measure Signal Generator with Oscilloscope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-18 17:51:15 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <b94f9e7d-818a-43c8-a893-a7b5ba7bfd5c@t12g2000prg.googlegroups.com>
Source record: 4755

On Jul 17, 11:50 am, joshhemm...@fastmail.fm wrote:
> I bought an old Heathkit IG-42 "Laboratory Generator" at a flea
> market
> the other day. It powers up OK but I don't have anything to test it
> with except a TEK 465 O-scope. I looked for an output with the scope
> but couldn't find anything. I know the scope is working because its
> 1K hz calibration signal looks fine.
>
> The generator dial goes from 100 KC to 30 MC. Is this too high a
> frequency to be monitored with a 465?

Any Tektronix scope from 541 on up to 465 or 475 is good enough.

I have a dusty IG-42 in the workshop (replaced by an HP606). It still
works fine and remains in power output calibration although the
frequency markings were never that good.

I almost hate to ask, but did you check the tubes inside your IG-42?
At least to see if the filaments are glowing? A couple of sheet metal
screws in the back hold the main case shell to the main assembly.

BAMA doesn't have a manual on the IG-42, just the SG-8 (the model
without the output meter or better attenuator). I have
one...somewhere
in the old stuff in the workshop. I could scan it if I can find
it...and the
nice Kodak all-in-one is working (which it isn't as of a few days
ago).

Len AF6AY

# 1019. china whole sale prada armani A&F lacoste polo jacket,chanel coach handbags from china suppliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-19 01:29:26 UTC
From: "www.urbanhotsale.net" <cnshoes84@yahoo.com.cn>
Message-ID: <a8f774fa-302f-4b92-ab3c-31b7a203101e@d19g2000prm.googlegroups.com>
Source record: 4756

Discount Coach Sandals, Dior Sandals, Prada Sandals, Chanel Sandals, Versace Sandals, Crocs Sandals, Women's Sandals Men's Slippers From China
Discount, Prada Sunglasses, Discount, D&G Sunglasses, Discount, Fendi
Sunglasses,Discount,Burberry Sunglasses Discount, Chanel Sunglasses Discount, LVSunglasses Discount, Dior Sunglasses Discount, (G U C C I ) Sunglasses Discount, Armani Sunglasses Discount, Versace SunglassesDiscount, A&F Sunglasses Discount, LV Sunglasses

For more products pls visit:
http://groups.google.com/group/sci.engr.television.broadcast/browse_thread/thread/6eb9bed7645ab589/8b1c58a3a2cf0d19

# 1020. FS: AT-271 Fishing Pole Antenna. .. Military Collapsible Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-19 02:01:13 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <QVbgk.24119$Mc.3148@read1.cgocable.net>
Source record: 4757
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.swap

This portable antenna can be used for the top section of a Vertical Antenna
OR Horizontal elements for an Antenna System such as the Buddipole tm
..... A Great QRP / Portable Antenna weighs only 400 Grams [14 Oz ]
and measures 104" extended yet only 14" long when folded. Picture
The construction is the same as is used for sectional fishing poles. Each
of the 8 hollow tubular metal sections has a plug one one end and a socket
on the other end. All the sections are connected by a string made of either
a cloth or metal cord. At the bottom of the base element there's a spring
inside the tube to tension the cord. Some units may use an elastic
shock-cord material. This way all the elements are kept in order when
they are disconnected from each other and are held together when assembled
into a 104" [8.6 Ft] long antenna. When the elements are folded or
disassembled the package is only 14 inches long.
The base has a male 3/8-24 thread which is the same as is used on most Ham
Radio and CB antennas. Some sort of spring base could be used when this
antenna is used because the hollow antenna elements will "fold" if too much
force is applied to them.
These units are in Like New Condition.. Sold AS-IS but will not be DOA.
ONLY $30 Plus Shipping

Have access to more...ASK!

## 1021. the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 03:17:04 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com>
Source record: 4758

I'm finding that if you're looking for any heatsink that there are zillions of places to pick one up and that if you are looking for a particular sink that it is a futile task. With a little help from my friends, I'm putting together the mosfet amp in the 2006 handbook and I've pretty much secured everything on the parts list save the heatsink. It is the same unit that was used on the original FARA amp as well. Anyone have this beast in the junk bin or know of a purveyor who might?? I've scoured the web and no joy so far. The sink is an AAVID part (#244609B02). Thanks in advance all.

Gary
ka9rao

# 1022. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 04:34:24 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <J-OdnVqy_fNNjBnVnZ2dnUVZ_gKdnZ2d@comcast.com>
Source record: 4760

Pete KE9OA wrote:
> Mouser. 532-244609B02
>
> "Gary" <gbelcas@comcast.net> wrote in message
> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>>
>> I'm finding that if you're looking for any heatsink that there are
>> zillions of places to pick one up and that if you are looking for
>> a particular sink that it is a futile task. With a little help
>> from my friends, I'm putting together the mosfet amp in the 2006 handbook
>> and I've pretty much secured everything on the parts list save the
>> heatsink. It is the same unit that was used on the original FARA amp as
>> well. Anyone have this beast in the junk bin or know of a purveyor who
>> might?? I've scoured the web and no joy so far. The sink is an AAVID
>> part (#244609B02). Thanks in advance all.
>>
>> Gary
>> ka9rao
>
>

Apart from some teflon wire (thanks again Pete), Mouser had most of what
I needed. Unfortunately, they no longer carry said heatsink. Thanks
though. Other ideas ??

Gary

# 1023. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 05:30:49 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <M4SdnRCzK-ZhjRnVnZ2dnUVZ_tvinZ2d@comcast.com>
Source record: 4759

Mouser. 532-244609B02

"Gary" <gbelcas@comcast.net> wrote in message
news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>
>
> I'm finding that if you're looking for any heatsink that there are
> zillions of places to pick one up and that if you are looking for
> a particular sink that it is a futile task. With a little help
> from my friends, I'm putting together the mosfet amp in the 2006 handbook
> and I've pretty much secured everything on the parts list save the
> heatsink. It is the same unit that was used on the original FARA amp as
> well. Anyone have this beast in the junk bin or know of a purveyor who
> might?? I've scoured the web and no joy so far. The sink is an AAVID
> part (#244609B02). Thanks in advance all.
>
> Gary
> ka9rao

# 1024. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 05:36:27 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <97mdnQE9Y_bRjxnVnZ2dnUVZ_tvinZ2d@comcast.com>
Source record: 4761

start here:

http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wildcards&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0

if you know the parameters of the heat sink in question, a search through these pages on the Mouser website should give you what you need. there are several pages to go through, so you do have your work cut out for you!

Pete

"Gary" <gbelcas@comcast.net> wrote in message news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>
>
> I'm finding that if you're looking for any heatsink that there are
> zillions of places to pick one up and that if you are looking for
> a particular sink that it is a futile task. With a little help
> from my friends, I'm putting together the mosfet amp in the 2006 handbook
> and I've pretty much secured everything on the parts list save the
> heatsink. It is the same unit that was used on the original FARA amp as
> well. Anyone have this beast in the junk bin or know of a purveyor who
> might?? I've scoured the web and no joy so far. The sink is an AAVID
> part (#244609B02). Thanks in advance all.
>
> Gary
> ka9rao

# 1025. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 08:44:23 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <bfednaK7e4z10RnVnZ2dnUVZ_uWdnZ2d@comcast.com>
Source record: 4762

Pete KE9OA wrote:
> start here:
>
> http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wildcards&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0
>
> if you know the parameters of the heat sink in question, a search through
> these pages on the Mouser website should give you what you need. there are
> several pages to go through, so you do have your work cut out for you!
>
> Pete
>
> "Gary" <gbelcas@comcast.net> wrote in message
> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>>
>> I'm finding that if you're looking for any heatsink that there are
>> zillions of places to pick one up and that if you are looking for
>> a particular sink that it is a futile task. With a little help
>> from my friends, I'm putting together the mosfet amp in the 2006 handbook
>> and I've pretty much secured everything on the parts list save the
>> heatsink. It is the same unit that was used on the original FARA amp as
>> well. Anyone have this beast in the junk bin or know of a purveyor who
>> might?? I've scoured the web and no joy so far. The sink is an AAVID
>> part (#244609B02). Thanks in advance all.
>>
>> Gary
>> ka9rao
>
>

Thanks for the advice. Mouser very nearly had a replacement. The unit
has horizontal fins instead of vertical and as my application is
convection-only, this likely tips the balance on effectiveness (safety).
Did find another site and it looks like a good one. It's Nebraska Sales
and Surplus. I've purchased from them before and have no complaints.
Thanks again for the quick replies.

Gary

# 1026. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 11:33:09 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <69ednQRTjLye6RnVRVnyvQA@pipex.net>
Source record: 4763

> Apart from some teflon wire (thanks again Pete), Mouser had most of what
> I needed. Unfortunately, they no longer carry said heatsink. Thanks
> though. Other ideas ??
>
> Gary
==========
For large heatsinks (perhaps not precisely the type you need ) flea
markets will be a likely source . Otherwise there might be an
electronics surplus store in your area .
Some time ago someone gave me a clapped-out (probably illegal) CB
amplifier (of Italian origin) with a heat sink to suit your project
.....however I am in Scotland- UK ,otherwise I would be happy to
send it to you .

Frank GM0CSZ / KN6WH

# 1027. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 16:45:52 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <w5-dnZtM-dzZIBnVnZ2dnUVZ_jydnZ2d@comcast.com>
Source record: 4764

Highland Ham wrote:
>
>> Apart from some teflon wire (thanks again Pete), Mouser had most of
>> what I needed. Unfortunately, they no longer carry said heatsink.
>> Thanks though. Other ideas ??
>>
>> Gary
> ==========
> For large heatsinks (perhaps not precisely the type you need ) flea
> markets will be a likely source . Otherwise there might be an
> electronics surplus store in your area .
> Some time ago someone gave me a clapped-out (probably illegal) CB
> amplifier (of Italian origin) with a heat sink to suit your project
> ........however I am in Scotland- UK ,otherwise I would be happy to
> send it to you .
>
>
> Frank GM0CSZ / KN6WH
>

Thanks for the thoughts Frank. I would not have guessed this before the fact but I'm finding that tracking down / scrounging these bits and pieces is actually fun (I am also sure that there is great probability that I will rue these words...). Thanks again all.

Gary

# 1028. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 16:56:17 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <EZOdncpQl6Q7IhnVnZ2dnUVZ_sWdnZ2d@web-ster.com>
Source record: 4765

Gary wrote:
>
>
> I'm finding that if you're looking for any heatsink that there are
> zillions of places to pick one up and that if you are looking for
> a particular sink that it is a futile task. With a little help
> from my friends, I'm putting together the mosfet amp in the 2006
> handbook and I've pretty much secured everything on the parts list save
> the heatsink. It is the same unit that was used on the original FARA
> amp as well. Anyone have this beast in the junk bin or know of a
> purveyor who might?? I've scoured the web and no joy so far. The sink
> is an AAVID part (#244609B02). Thanks in advance all.
>
> Gary
> ka9rao

Aavid makes so many heat sinks that you almost have to buy custom to get what you need.

Usually your best bet with heatsinks for a one-off is to find one that meets your needs and use it, even if it's not identically the same thing as the plans.

If you can find one with specifications get one that matches the thermal conductivity to the air as what you have; if you can't get one with specifications look for about the same or greater total surface area and fin spacing.

The handbook used to have directions on bending heatsinks from sheet -- you basically make a bunch of nested 'U's with heat sink compound between. I don't know how well that works, or if they still do it. I suspect that for natural convection you'll be fine with that.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 1029. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 17:34:00 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <g62ha6$bsh$1@news.albasani.net>
Source record: 4766

Gary wrote:
>
>
> I'm finding that if you're looking for any heatsink that there are
> zillions of places to pick one up and that if you are looking for
> a particular sink that it is a futile task. With a little help
> from my friends, I'm putting together the mosfet amp in the 2006
> handbook and I've pretty much secured everything on the parts list save
> the heatsink. It is the same unit that was used on the original FARA
> amp as well. Anyone have this beast in the junk bin or know of a
> purveyor who might?? I've scoured the web and no joy so far. The sink
> is an AAVID part (#244609B02). Thanks in advance all.
>
> Gary
> ka9rao

Don't worry about finding the exact, go the next bigger heatsink! You
will not be sorry you did.

While you are at it, consider mounting a muffin fan on the sink to push
air though the ribs (if the plans don't already call for one.) Again,
you won't be sorry you did!

I have not seen the plans you are speaking of, but I am taking it for
granted it is a leen-e-air.

Regards,
JS

# 1030. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-21 18:06:12 UTC
From: W3CQH <hsgorden@comcast.net>
Message-ID: <NM2dnS2slJqMTRnVnZ2dnUVZ_hCdnZ2d@comcast.com>
Source record: 4767

"Gary" <gbelcas@comcast.net> wrote in message
news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>
>
> I'm finding that if you're looking for any heatsink that there are
> zillions of places to pick one up and that if you are looking for
> a particular sink that it is a futile task. With a little help
> from my friends, I'm putting together the mosfet amp in the 2006 handbook
> and I've pretty much secured everything on the parts list save the
> heatsink. It is the same unit that was used on the original FARA amp as
> well. Anyone have this beast in the junk bin or know of a purveyor who
> might?? I've scoured the web and no joy so far. The sink is an AAVID
> part (#244609B02). Thanks in advance all.
>
> Gary
> ka9rao

Have you tried: info@aavid.com

# 1031. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-22 00:31:34 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <hI6dnbtEUePxtxjVnZ2dnUVZ_jOdnZ2d@comcast.com>
Source record: 4768

"Gary" <gbelcas@comcast.net> wrote in message
news:bfednaK7e4z10RnVnZ2dnUVZ_uWdnZ2d@comcast.com...
> Pete KE9OA wrote:
>> start here:
>>
>> http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wildcar
ds&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0
>>
>> if you know the parameters of the heat sink in question, a search through
>> these pages on the Mouser website should give you what you need. there are
>> several pages to go through, so you do have your work cut out for you!
>>
>> Pete
>>
>> "Gary" <gbelcas@comcast.net> wrote in message
>> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>>>
>>> I'm finding that if you're looking for any heatsink that there are zillions
>>> of places to pick one up and that if you are looking for
>>> a particular sink that it is a futile task. With a little help
>>> from my friends, I'm putting together the mosfet amp in the 2006 handbook
>>> and I've pretty much secured everything on the parts list save the heatsink.
>>> It is the same unit that was used on the original FARA amp as well. Anyone
>>> have this beast in the junk bin or know of a purveyor who might?? I've
>>> scoured the web and no joy so far. The sink is an AAVID part (#244609B02).
>>> Thanks in advance all.
>>>
>>> Gary
>>> ka9rao
>>
>>
>
> Thanks for the advice. Mouser very nearly had a replacement. The unit has
> horizontal fins instead of vertical and as my application is convection-only,
> this likely tips the balance on effectiveness (safety).
> Did find another site and it looks like a good one. It's Nebraska Sales and
> Surplus. I've purchased from them before and have no complaints. Thanks again
> for the quick replies.
>
> Gary

I don't have a copy or the 2006 handbook, so I can't visualize the heatsink that
you're looking for. Low resistance heatsinks are usually made from extrusions
and can be any of a number of designs.

Is there a photo in the article that shows the heatsink? Possible for you to post a scan of it on alt.binaries.schematics.electronic? Also, the dimensions of the heatsink would help to find a substitute and source.
If you're in or near the central Florida area, Skycraft usually has a couple bins of heavy heatsinks that might suit the job. I bought a couple that calculates to about 0.5 degC/watt each about a year ago. Last time I was in the store (in February this year), they still had about 10 of them on the shelf.

You mentioned that it was also used on the FARA amp. Is there a link to a web page that describes (hopefully with a photo) the amp?

Cheers!!
--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

Experience: What you get when you don't get what you want

# 1032. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-22 04:15:37 UTC
From: Pete KE9OA <p.gianako@comcast.net>
Message-ID: <wN6dnXnZG7NGzRjVnZ2dnUVZ_gCdnZ2d@comcast.com>
Source record: 4769

Oh, that's ok Gary. I hope you find the one you are looking for. Most of
that stuff from Surplus Sales of Nebraska came from the Inventory Disposal
sale from Rockwell-Collins, which means that it is of good quality.

Pete

"Gary" <gbelcas@comcast.net> wrote in message
news:bfednaK7e4z10RnVnZ2dnUVZ_uWdnZ2d@comcast.com...
> Pete KE9OA wrote:
>> start here:
>>
>> http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wildcar
ds&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0
>>
>> if you know the parameters of the heat sink in question, a search
>> through these pages on the Mouser website should give you what you need.
>> there are several pages to go through, so you do have your work cut out
>> for you!
>>
>> Pete
>>
>> "Gary" <gbelcas@comcast.net> wrote in message
>> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>>>
>>> I'm finding that if you're looking for any heatsink that there are
>>> zillions of places to pick one up and that if you are looking for
>>> a particular sink that it is a futile task. With a little help
>>> from my friends, I'm putting together the mosfet amp in the 2006
>>> handbook and I've pretty much secured everything on the parts list save
>>> the heatsink. It is the same unit that was used on the original FARA
>>> amp as well. Anyone have this beast in the junk bin or know of a
>>> purveyor who might?? I've scoured the web and no joy so far. The sink
>>> is an AAVID part (#244609B02). Thanks in advance all.
>>>
>>> Gary
>>> ka9rao
>>
>>
>
> Thanks for the advice. Mouser very nearly had a replacement. The unit
> has horizontal fins instead of vertical and as my application is
> convection-only, this likely tips the balance on effectiveness (safety).
> Did find another site and it looks like a good one. It's Nebraska Sales
> and Surplus. I've purchased from them before and have no complaints.
> Thanks again for the quick replies.

>
> Gary

# 1033. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-22 07:36:31 UTC
From: Gary <gbelcas@comcast.net>
Message-ID: <it2dnTL8aImdExjVnZ2dnUVZ_uGdnZ2d@comcast.com>
Source record: 4770

Pete KE9OA wrote:
> Oh, that's ok Gary. I hope you find the one you are looking for. Most of
> that stuff from Surplus Sales of Nebraska came from the Inventory Disposal
> sale from Rockwell-Collins, which means that it is of good quality.
>
> Pete
>
> "Gary" <gbelcas@comcast.net> wrote in message
> news:bfednaK7e4z10RnVnZ2dnUVZ_uWdnZ2d@comcast.com...
>> Pete KE9OA wrote:
>>> start here:
>>>
>>> http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wildca
rds&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0
>>>
>>> if you know the parameters of the heat sink in question, a search
>>> through these pages on the Mouser website should give you what you need.
>>> there are several pages to go through, so you do have your work cut out
>>> for you!
>>>
>>> Pete
>>>
>>> "Gary" <gbelcas@comcast.net> wrote in message
>>> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>>>> I'm finding that if you're looking for any heatsink that there are
>>>> zillions of places to pick one up and that if you are looking for
>>>> a particular sink that it is a futile task. With a little help
>>>> from my friends, I'm putting together the mosfet amp in the 2006
>>>> handbook and I've pretty much secured everything on the parts list save
>>>> the heatsink. It is the same unit that was used on the original FARA
>>>> amp as well. Anyone have this beast in the junk bin or know of a
>>>> purveyor who might?? I've scoured the web and no joy so far. The sink
>>>> is an AAVID part (#244609B02). Thanks in advance all.
>>>>
>>>> Gary
>>>> ka9rao
>>>
>> Thanks for the advice. Mouser very nearly had a replacement. The unit
>> has horizontal fins instead of vertical and as my application is
>> convection-only, this likely tips the balance on effectiveness (safety).
>> Did find another site and it looks like a good one. It's Nebraska Sales
>> and Surplus. I've purchased from them before and have no complaints.
>> Thanks again for the quick replies.
>>

>> Gary
>
>
Thanks one and all for the suggestions. Started soldering this evening
so there's no turning back...

Gary

# 1034. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-23 15:12:34 UTC
From: jimmie68@gmail.com
Message-ID: <7905114b-7614-4ee0-911f-b0b96b1e0e53@x35g2000hsb.googlegroups.com>
Source record: 4771

Gary wrote:
> Pete KE9OA wrote:
> > Oh, that's ok Gary. I hope you find the one you are looking for. Most of
> > that stuff from Surplus Sales of Nebraska came from the Inventory Disposal
> > sale from Rockwell-Collins, which means that it is of good quality.
> >
> > Pete
> >
> > "Gary" <gbelcas@comcast.net> wrote in message
> > news:bfednaK7e4z10RnVnZ2dnUVZ_uWdnZ2d@comcast.com...
> >> Pete KE9OA wrote:
> >>> start here:
> >>>
> >>> http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wild
cards&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0
> >>>
> >>> if you know the parameters of the heat sink in question, a search
> >>> through these pages on the Mouser website should give you what you need.
> >>> there are several pages to go through, so you do have your work cut out
> >>> for you!
> >>>
> >>> Pete
> >>>
> >>> "Gary" <gbelcas@comcast.net> wrote in message
> >>> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
> >>>> I'm finding that if you're looking for any heatsink that there are
> >>>> zillions of places to pick one up and that if you are looking for
> >>>> a particular sink that it is a futile task. With a little help
> >>>> from my friends, I'm putting together the mosfet amp in the 2006
> >>>> handbook and I've pretty much secured everything on the parts list save
> >>>> the heatsink. It is the same unit that was used on the original FARA
> >>>> amp as well. Anyone have this beast in the junk bin or know of a
> >>>> purveyor who might?? I've scoured the web and no joy so far. The sink
> >>>> is an AAVID part (#244609B02). Thanks in advance all.
> >>>>
> >>>> Gary
> >>>> ka9rao
> >>>
> >> Thanks for the advice. Mouser very nearly had a replacement. The unit
> >> has horizontal fins instead of vertical and as my application is
> >> convection-only, this likely tips the balance on effectiveness (safety).
> >> Did find another site and it looks like a good one. It's Nebraska Sales
> >> and Surplus. I've purchased from them before and have no complaints.
> >> Thanks again for the quick replies.

> >>
> >> Gary
> >
> >
> Thanks one and all for the suggestions. Started soldering this evening
> so there's no turning back...
>
> Gary

I've found several good heatsinks and power supplies at Goodwill. I purchased an old stereo amp that had 6 100 watt channels. The last one I bought cost less than $20. I am really surprised at the way people cast things like this off. It is now the heart of my home entertainment system.

Jimmie

## 1035. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-24 01:57:14 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <4888acc7$0$18110$9a6e19ea@unlimited.newshosting.com>
Source record: 4772

jimmie68@gmail.com wrote:
>
> Gary wrote:
>> Pete KE9OA wrote:
>>> Oh, that's ok Gary. I hope you find the one you are looking for. Most of
>>> that stuff from Surplus Sales of Nebraska came from the Inventory Disposal
>>> sale from Rockwell-Collins, which means that it is of good quality.
>>>
>>> Pete
>>>
>>> "Gary" <gbelcas@comcast.net> wrote in message
>>> news:bfednaK7e4z10RnVnZ2dnUVZ_uWdnZ2d@comcast.com...
>>>> Pete KE9OA wrote:
>>>>> start here:
>>>>>
>>>>> http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wild
cards&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0
>>>>>
>>>>> if you know the parameters of the heat sink in question, a search
>>>>> through these pages on the Mouser website should give you what you need.
>>>>> there are several pages to go through, so you do have your work cut out
>>>>> for you!
>>>>>
>>>>> Pete
>>>>>
>>>>> "Gary" <gbelcas@comcast.net> wrote in message
>>>>> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>>>>>> I'm finding that if you're looking for any heatsink that there are
>>>>>> zillions of places to pick one up and that if you are looking for
>>>>>> a particular sink that it is a futile task. With a little help
>>>>>> from my friends, I'm putting together the mosfet amp in the 2006
>>>>>> handbook and I've pretty much secured everything on the parts list save
>>>>>> the heatsink. It is the same unit that was used on the original FARA
>>>>>> amp as well. Anyone have this beast in the junk bin or know of a
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>>>>>> is an AAVID part (#244609B02). Thanks in advance all.
>>>>>>
>>>>>> Gary
>>>>>> ka9rao
>>>> Thanks for the advice. Mouser very nearly had a replacement. The unit
>>>> has horizontal fins instead of vertical and as my application is
>>>> convection-only, this likely tips the balance on effectiveness (safety).
>>>> Did find another site and it looks like a good one. It's Nebraska Sales
>>>> and Surplus. I've purchased from them before and have no complaints.

>>>> Thanks again for the quick replies.
>>>>
>>>> Gary
>>>
>> Thanks one and all for the suggestions. Started soldering this evening
>> so there's no turning back...
>>
>> Gary
>
> I've found several good heatsinks and power supplies at Goodwill. I
> purchased an old stereo amp that had 6 100 watt channels. The last one
> I bought cost less than $20. I am really surprised at the way people
> cast things like this off. It is now the heart of my home
> entertainment system.
>
> Jimmie
\

Don't forget old land mobile radios like MASTR II, Mitrek or SyntorX for
some heat sinks with great thermal mass. You may need some metalworking
tools to cut off and smooth down the mating area neded for your device
layout.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 1036. FA: 4 Type N Female to Female Adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-24 21:42:01 UTC
From: RF King <TravisCurrier@gmail.com>
Message-ID: <3b2d8e5c-6d56-419a-ad7b-63d7185ffb2d@n33g2000pri.googlegroups.com>
Source record: 4773

FA: 4 Type N Female to Female Adapters

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=190239258075

For complete CATALOG Go to.

http://www.aaarfproducts.com/catalog/AARFBROCHURE01-08.pdf

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1037. Re: the great heatsink search

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-24 21:52:23 UTC
From: Dave M <masondg4xx4@cxxomcast.net>
Message-ID: <eash84t2or3pl12h46v2af00ao043kl751@4ax.com>
Source record: 4774

On Tue, 22 Jul 2008 00:36:31 -0700, Gary <gbelcas@comcast.net> wrote:

>Pete KE9OA wrote:
>> Oh, that's ok Gary. I hope you find the one you are looking for. Most of
>> that stuff from Surplus Sales of Nebraska came from the Inventory Disposal
>> sale from Rockwell-Collins, which means that it is of good quality.
>>
>> Pete
>>
>> "Gary" <gbelcas@comcast.net> wrote in message
>> news:bfednaK7e4z10RnVnZ2dnUVZ_uWdnZ2d@comcast.com...
>>> Pete KE9OA wrote:
>>>> start here:
>>>>
>>>> http://www.mouser.com/Search/Refine.aspx?FS=TRUE&Ntx=mode%2bmatchall&Ntk=Mouser_Wildc
ards&OriginalKeyword=aavid+&Ns=P_SField&Ntt=*aavid*&N=1323038&No=0
>>>>
>>>> if you know the parameters of the heat sink in question, a search
>>>> through these pages on the Mouser website should give you what you need.
>>>> there are several pages to go through, so you do have your work cut out
>>>> for you!
>>>>
>>>> Pete
>>>>
>>>> "Gary" <gbelcas@comcast.net> wrote in message
>>>> news:Od-dnSX9BckqYh7VnZ2dnUVZ_gCdnZ2d@comcast.com...
>>>>> I'm finding that if you're looking for any heatsink that there are
>>>>> zillions of places to pick one up and that if you are looking for
>>>>> a particular sink that it is a futile task. With a little help
>>>>> from my friends, I'm putting together the mosfet amp in the 2006
>>>>> handbook and I've pretty much secured everything on the parts list save
>>>>> the heatsink. It is the same unit that was used on the original FARA
>>>>> amp as well. Anyone have this beast in the junk bin or know of a
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>>>>> is an AAVID part (#244609B02). Thanks in advance all.
>>>>>
>>>>> Gary
>>>>> ka9rao
>>>>
>>> Thanks for the advice. Mouser very nearly had a replacement. The unit
>>> has horizontal fins instead of vertical and as my application is
>>> convection-only, this likely tips the balance on effectiveness (safety).
>>> Did find another site and it looks like a good one. It's Nebraska Sales
>>> and Surplus. I've purchased from them before and have no complaints.

>>> Thanks again for the quick replies.
>>>
>>> Gary
>>
>>
>Thanks one and all for the suggestions. Started soldering this evening
>so there's no turning back...
>
>Gary

OK, I found a copy of the article that you're building. If it's the same article that's in the 2007 handbook (titled "A Broadband HF Amplifier Using Low-cost MOSFETs" bu WA2EBY), then maybe I can help with the heatsink.
I found a photo in the article that shows pretty clearly the heatsink as mounted on the rear of the chassis. I'm guessing at the dimensions of the rear panel of the chassis. The box is given as 3.5x6x8, but it's hard to conclude whether the rear panel is 3.5x6 or 3.5x8.
I assumed the rear panel to be 3.5x8, did a bit of extrapolation and estimated the size of the heatsink to be approximately 5.5" wide, 2.75" tall, 1.25" fin height.
Newark shows a heatsink meeting those measurements (approximately) at
http://www.newark.com/54M0782/fans-heat-sinks-thermal-management/product.us0?sku=fischer-elektronik-sk-85-75-sa,
and appears to be in stock. The given measurements for that heatsink are 160mm wide, 75mm tall and 40mm fin height, with a thermal resistance of 1.2 degC/watt.
No clear area in the middle, so you'll likely have to drill & tap the base to mount the transistors.

The heatsink itself is reasonable enough, but the caveat is that it's stocked in the UK and drop shipped from there, with a $20 handling fee.

I stopped searching when I found that heatsink, so you might do a more thorough search using those approximate measurements and find something suitable, and less expensive.

Cheers!!!
==========

Dave M

Never take a laxative and a sleeping pill at the same time!!

# 1038. FA: 4 Type N Male to Male Adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-24 23:36:15 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <744e44fe-29fc-47c8-9033-828c3a03222b@a21g2000prf.googlegroups.com>
Source record: 4775

FA: 4 Type N Male to Male Adapters

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=190239280220

For complete CATALOG Go to.

http://www.aaarfproducts.com/catalog/AARFBROCHURE01-08.pdf

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

## 1039. Stabilizing HE-30?? Ideas?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-25 00:47:42 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Uo9ik.2377$1N1.1777@newsfe07.iad>
Source record: 4776

My HE-30 Lafayette is virtually useless on 40 CW; it constantly walks... I'm looking for some suggestions for circuit mods to attempt to tame it down a bit. Schematic is on Bama.

# 1040. Re: Stabilizing HE-30?? Ideas?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-25 04:31:21 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0807250024540.24507@darkstar.example.org>
Source record: 4777

On Thu, 24 Jul 2008, Tio Pedro wrote:

> My HE-30 Lafayette is virtually useless on 40 CW; it constantly
> walks... I'm looking for some suggestions for circuit mods to
> attempt to tame it down a bit. Schematic is on Bama.
>
That's the one that's sort of a clone of the S-38?

There's the classic modification article in "73" about 1964, where someone trading it in has to undo all the modifications, and just as he gets to the store he remembers one last thing he hadn't undone.

There was an Indian ham who wrote quite a few articles in the late sixties and early seventies, and he had an article in QST about 1971 or '72 which I thought was about the S-38. That particular article was about his odd method of receiving CW, go for a really low tone (and he explained why, I can't remember the details), but he talked about the troubles he had with stability. I think he solved it with a crystal controlled converter (I think he had two articles about that one, a 7360 based converter that was like the front end in a QST receiver, complete with front end Q-multiplier, and then a mosfet version of the same basic design).

You should be reading Popular Communication this month. Some guy is writing about his first Lafayette receiver.

But seriously, when I saw that, it reminded me not of having that early receiver, but of finding an entry in home hanyman's encyclopedia for that first Lafayette receiver of yours. I guess it was put out by Mechanix Illustrated, and had some articles from Electronics Illustrated. Not that much, but when I was 10 or 11 and looking for electronic and radio things to read, finding the few in there was great. Unfortunately, I can't find the specific volume, that I did look for after noticing your column in the magazine.

Michael VE2BVW

# 1041. Re: Stabilizing HE-30?? Ideas?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-25 06:56:47 UTC
From: Tom2000 <abuse@giganews.net>
Message-ID: <r7ui84tefa1ek2q54itschj3jhjm3v1f00@4ax.com>
Source record: 4778

On Thu, 24 Jul 2008 20:47:42 -0400, "Tio Pedro"
<radioconnection@cox.net> wrote:

>My HE-30 Lafayette is virtually useless on 40 CW; it constantly
>walks... I'm looking for some suggestions for circuit mods to
>attempt to tame it down a bit. Schematic is on Bama.
>

You might look into a "huff 'n puff" stabilization scheme. The link
below is a good place to start:

http://www.hanssummers.com/radio/huffpuff/index.htm

Good luck!

Tom

# 1042. Re: Stabilizing HE-30?? Ideas?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-25 10:22:12 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <wPhik.143$wY7.85@newsfe01.iad>
Source record: 4779

"Tom2000" <abuse@giganews.net> wrote in message
news:r7ui84tefa1ek2q54itschj3jhjm3v1f00@4ax.com...
> On Thu, 24 Jul 2008 20:47:42 -0400, "Tio Pedro"
> <radioconnection@cox.net> wrote:
> > You might look into a "huff 'n puff" stabilization scheme. The link
> below is a good place to start:
>
> http://www.hanssummers.com/radio/huffpuff/index.htm
>
> Good luck!
>
> Tom
>
Thought of one, but the drift rate is too fast for many
H&P circuits, plus it would exceed the lock range
in short order...

Pete

# 1043. Re: Stabilizing HE-30?? Ideas?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-25 10:27:07 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <7Uhik.144$wY7.12@newsfe01.iad>
Source record: 4780

"Michael Black" <et472@ncf.ca> wrote in message
news:Pine.LNX.4.64.0807250024540.24507@darkstar.example.org...
> On Thu, 24 Jul 2008, Tio Pedro wrote:
>
> That's the one that's sort of a clone of the S-38?
>
> > Michael VE2BVW
>
It is the clone of the HE-10, which looks like the S-38 :)

I added a voltage regulator, which stopped the oscillator
pulling problems when running the IF gain up and down
(thirty volt swing!). I did a few other simple mods to
get rid of residual hum in the headphones (ground loop
on filament grounding and added one more filter stage
in the PS.) But this drift has me stumped. I tried a
few different osc. circuits, but the design is weird.
It is basically a BS Hartley, except on the highest band
which requires a feedback loop back to the plate to
get it into osc. I suspect it is the nature of the beast.

Pete

# 1044. lot of vintage mics- CB radios-car radios-wood/bakelite radios-receivers-mics-transceivers-TUBES-estate sale clearance

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-25 12:14:18 UTC
From: "Dwight D. Eisenhower" <rottedHonda@yahoo.com>
Message-ID: <3c986fec-daa4-443e-b418-e4a1b4ac1d18@a6g2000prm.googlegroups.com>
Source record: 4781

http://shop.ebay.com/merchant/66-catalina_W0QQ_nkwZQQ_armrsZ1QQ_fromZQQ_mdoZ

WWII SIGNAL CORPS LANTERN-U.S.ARMY-MX290GV-VINTAGE-$$$$ 0 Bids $24.99
$45.00
Free 3d 13h 28m

16 TAPES LOT 4-TRACK CARTRIDGES-SINATRA-PETER,PAUL,MARY 0 Bids $24.99
$50.00
Free 3d 13h 28m

PHILCO MODEL 66 WOODEN TOMBSTONE ANTIQUE RADIO-TUBES-$$ 0 Bids $49.98
$250.00
+$40.00 3d 13h 28m

PHILCO VINTAGE BAKELITE TELEVISION BOOSTER BOX-COMPLETE 0 Bids $9.98
+$10.00 3d 13h 28m

ANTIQUE CUNNINGHAM WOOD RADIO w/TUBES-parts/fix/restore 1 Bid $24.99
+$20.00 3d 13h 28m

AMPEX MICRO 85 STEREO CASSETTE RECORDER-INTEGRATED AMP-
MADE IN AUSTRIA-VINTAGE HIGH END DECK w/120 VAC MOTOR-$ 0 Bids $24.99
$50.00
+$20.00 3d 13h 28m

LOT OF (14) OLD PLASTIC-BAKELITE-ANTIQUE TUBE RADIOS-$$ 0 Bids $99.88
+$100.00 3d 13h 28m

1930's WOODEN RADIO CATHEDRAL EXTERNAL SPEAKER-ANTIQUE- 1 Bid $24.99
+$20.00 3d 13h 28m

(6) RCA SOUNDTAPE MAGAZINE LOADED LARGE CASSETTE TAPES- 0 Bids $24.99
$125.00
+$10.00 3d 13h 28m

ZENITH LONG DISTANCE WAVE MAGNET SUITCASE TUBE RADIO-$$ 0 Bids $24.99
+$25.00 3d 13h 28m

FIRESTONE MODEL S-7403-3 WOOD RADIO-TUBES-parts/fix-$$$ 0 Bids $24.99
+$25.00 3d 13h 28m

MUNTZ 4-TRACK CARTRIDGE STEREO TAPE DECK W/MOUNT-NICE-$ 0 Bids $24.99
$100.00
+$30.00 3d 13h 28m

STEWART ANTIQUE PHONOGRAPH-EARLY 1900's-parts/restore-$ 0 Bids $24.99
+$35.00 3d 13h 28m

RCA SOUNDTAPE MAGAZINE LOADED CASSETTE RECORDER-SCP2-$$
STEREO SINGLE ENDED TUBE AMP INSIDE W/6V6'S-VINTAGE AMP 1 Bid $99.88
+$50.00 3d 13h 28m

STANDARD BRAND AM/FM STEREO TUNER-VINTAGE COMPONENT-$$$ 0 Bids $9.98
+$15.00 4d 13h 28m

WIPER MOTOR LINKAGE-GTO-CHEVELLE-GRAN SPORT-442-SKYLARK
CUTLASS-F85-SPECIAL-JUDGE-GT37-T37-MALIBU-SS396-SS454-$ 0 Bids $9.98
+$10.00 4d 13h 28m

VINTAGE ASTATIC D-104 MIC w/UG8 CHROME STAND-classic-$$ 2 Bids $10.50
+$10.00 4d 13h 28m

STEWART-WARNER MOD 07-5R5 ANTIQUE TUBE WOODEN RADIO-old 0 Bids $24.99
+$20.00 4d 13h 28m

ANTIQUE WOODEN ASTATIC TV STATION CONTROLLER-1940-50's- 0 Bids $9.98
+$10.00 4d 11h 54m

VINTAGE LIONEL-MULTI CONTROL TRAINMASTER TRANSFORMER-$$
25 VOLT OUTPUT w/ WHISTLE, DIRECTION, SPEED CONTROLS-VG 0 Bids $24.99
+$15.00 4d 13h 28m

VINTAGE RCA MODEL MI-12016G MICROPHONE w/CORD-rare-$$$$ 2 Bids $10.48
+$10.00 4d 13h 28m

(3) VINTAGE WALKIE-TALKIE CB RADIOS-ASSORTED MAKES-$$$$ 0 Bids $9.98
+$10.00 4d 13h 28m

BENDIX SAPPHIRE II ANTIQUE CAR RADIO-WHITE BUTTONS-part 2 Bids $10.98
+$10.00 4d 13h 28m

JULIETTE TOPPLAY CARTRIDGE PLAYER-2 TRACK ENDLESS LOOP-
SIMILAR TO PLAYTAPE-RARE VINTAGE AUDIO FORMAT PLAYER-$$ 0 Bids $9.98
+$10.00 4d 13h 28m

SPORTSMAN GREAT LAKES TRADE BAITCAST REEL-ANTIQUE-old-$ 0 Bids $9.98
+$10.00 4d 13h 28m

# 1045. Re: Stabilizing HE-30?? Ideas?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-25 16:22:27 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0807251210320.25232@darkstar.example.org>
Source record: 4782

On Fri, 25 Jul 2008, Tio Pedro wrote:

>
"Michael Black" <et472@ncf.ca> wrote in message
> news:Pine.LNX.4.64.0807250024540.24507@darkstar.example.org...
>> On Thu, 24 Jul 2008, Tio Pedro wrote:
>>
> > That's the one that's sort of a clone of the S-38?
>>
>>> Michael VE2BVW
>>
> It is the clone of the HE-10, which looks like the S-38 :)
>
> I added a voltage regulator, which stopped the oscillator
> pulling problems when running the IF gain up and down
> (thirty volt swing!). I did a few other simple mods to
> get rid of residual hum in the headphones (ground loop
> on filament grounding and added one more filter stage
> in the PS.) But this drift has me stumped. I tried a
> few different osc. circuits, but the design is weird.
> It is basically a BS Hartley, except on the highest band
> which requires a feedback loop back to the plate to
> get it into osc. I suspect it is the nature of the beast.
>
> Pete
>
I had a Hallicrafters S-120A, which was transistorized, the
only shortwave receiver that I could afford in 1971, and it
has to be the worst receiver ever sold. Not just the usual
faults of bad dial, bad image rejection and bad stability, but
it had the bonus of overloading really badly because they weren't
designing good solid state receivers at the time.

We lived with them because we couldn't afford anything better.
I'd say the experience of having such a bad receiver often
included attempts to improve them, even though they started
out so bad that it was impossible to do much.

The transistorized one, at least when I was 11, was too
undecipherable to do anything to. I did really get a handle
on SSB, since while the receiver had a BFO, it wasn't strong
enough to demodulate SSB. I kept having the feeling that
the receiver was overloaded, that's what the SSB sounded
like, and I think without prompting (but I can't remember
for sure) I got the idea that if I attenuated the incoming

signals I could demodulate the SSB. So I took pot scrounged
out of something and used it as an attenuator between the
antenna and the receiver, and I really could demodulate
SSB. The problem was that I had to attenuate the signals
so much that only the strongest could be received. Of course,
turning down the RF gain was basically what they told you to
do to receive SSB on pre-SSB receivers, so either I discovered
the idea by myself, or did read about it and put it to use,
I can't remember which.

I remember looking in the Handbook at the a filter to keep broadcast
radio out of the receiver, and pricing the toroids placed the project
out of my means. It might not have helped anyway, since the receiver
wasn't really shielded, and it seemed to overload from all the broadcast
signals, AM, FM and TV, while the filter was only a high pass filter
if I remember properly for AM broadcast.

I went from that to a Hammarlund SP-600, you can hardly make
a bigger jump.

Michael VE2BVW

# 1046. FA: 4 Type N Right Angle Male to Female Adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-26 01:06:24 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <3e125f5f-0298-4e08-b3cb-72c7a94ed8b0@y21g2000hsf.googlegroups.com>
Source record: 4783

FA: 4 Type N Right Angle Male to Female Adapters

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=190239282898

For complete CATALOG Go to.

http://www.aaarfproducts.com/catalog/AARFBROCHURE01-08.pdf

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1047. FA: 4 Type N Male to BNC Female Adapters

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-26 01:16:19 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <75bae7d1-6c48-47e2-9ddf-11911fca8ebb@t54g2000hsg.googlegroups.com>
Source record: 4784

FA: 4 Type N Male to BNC Female Adapters

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=190239287659

For complete CATALOG Go to.

http://www.aaarfproducts.com/catalog/AARFBROCHURE01-08.pdf

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1048. Re: lot of vintage mics- CB radios-car radios-wood/bakelite radios-receivers-mics-transceivers-TUBES-estate sale clearance

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-26 09:16:29 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.07.26.09.16.26.414905@localhost.localdomain>
Source record: 4785

You have been reported to Ebay for using spam all over Usenet to promote your auctions.

Bye, bye store. Bye, bye login.

And hopefully, bye, bye YOU!

# 1049. HUGE lot estate clearance-antique radios-phonos-test equip-mics-Grigsby-Grunow, Philco, Majestic, Wards Airline, consoles, tabletops, cathedral, tombstone, bakelite, wooden, plastic-much more- over 50 items listed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-26 12:52:10 UTC
From: ANTIQUE AUDIO <matthew.bunney@yahoo.com>
Message-ID: <369f6b7f-a65d-4d3f-ba35-6f6290e9cb9a@26g2000hsk.googlegroups.com>
Source record: 4786

updated list

http://shop.ebay.com/merchant/66-catalina_W0QQ_nkwZQQ_armrsZ1QQ_fromZQQ_mdoZ

WWII SIGNAL CORPS LANTERN-U.S.ARMY-MX290GV-VINTAGE-$$$$ 0 Bids $24.99
$45.00
Free 2d 12h 47m
16 TAPES LOT 4-TRACK CARTRIDGES-SINATRA-PETER,PAUL,MARY 1 Bid $24.99
Free 2d 12h 47m
PHILCO MODEL 66 WOODEN TOMBSTONE ANTIQUE RADIO-TUBES-$$ 0 Bids $49.98
$250.00
+$40.00 2d 12h 47m
PHILCO VINTAGE BAKELITE TELEVISION BOOSTER BOX-COMPLETE 0 Bids $9.98
+$10.00 2d 12h 47m
ANTIQUE CUNNINGHAM WOOD RADIO w/TUBES-parts/fix/restore 1 Bid $24.99
+$20.00 2d 12h 47m
AMPEX MICRO 85 STEREO CASSETTE RECORDER-INTEGRATED AMP-
MADE IN AUSTRIA-VINTAGE HIGH END DECK w/120 VAC MOTOR-$ 0 Bids $24.99
$50.00
+$20.00 2d 12h 47m
LOT OF (14) OLD PLASTIC-BAKELITE-ANTIQUE TUBE RADIOS-$$ 0 Bids $99.88
+$100.00 2d 12h 47m
1930's WOODEN RADIO CATHEDRAL EXTERNAL SPEAKER-ANTIQUE- 1 Bid $24.99
+$20.00 2d 12h 47m
(6) RCA SOUNDTAPE MAGAZINE LOADED LARGE CASSETTE TAPES- 0 Bids $24.99
$125.00
+$10.00 2d 12h 47m
STANDARD BRAND AM/FM STEREO TUNER-VINTAGE COMPONENT-$$$ 0 Bids $9.98
+$15.00 3d 12h 47m
WIPER MOTOR LINKAGE-GTO-CHEVELLE-GRAN SPORT-442-SKYLARK
CUTLASS-F85-SPECIAL-JUDGE-GT37-T37-MALIBU-SS396-SS454-$ 0 Bids $9.98
+$10.00 3d 12h 47m
VINTAGE ASTATIC D-104 MIC w/UG8 CHROME STAND-classic-$$ 2 Bids $10.50
+$10.00 3d 12h 47m
STEWART-WARNER MOD 07-5R5 ANTIQUE TUBE WOODEN RADIO-old 0 Bids $24.99
+$20.00 3d 12h 47m
VINTAGE LIONEL-MULTI CONTROL TRAINMASTER TRANSFORMER-$$
25 VOLT OUTPUT w/ WHISTLE, DIRECTION, SPEED CONTROLS-VG 0 Bids $24.99
+$15.00 3d 12h 47m
VINTAGE RCA MODEL MI-12016G MICROPHONE w/CORD-rare-$$$$ 3 Bids $11.01
+$10.00 3d 12h 47m
(3) VINTAGE WALKIE-TALKIE CB RADIOS-ASSORTED MAKES-$$$$ 0 Bids $9.98

+$10.00 3d 12h 47m
ANTIQUE WOODEN ASTATIC TV STATION CONTROLLER-1940-50's- 0 Bids $9.98
+$10.00 3d 11h 13m
BENDIX SAPPHIRE II ANTIQUE CAR RADIO-WHITE BUTTONS-part 2 Bids $10.98
+$10.00 3d 12h 47m
JULIETTE TOPPLAY CARTRIDGE PLAYER-2 TRACK ENDLESS LOOP-
SIMILAR TO PLAYTAPE-RARE VINTAGE AUDIO FORMAT PLAYER-$$ 0 Bids $9.98
+$10.00 3d 12h 47m
SPORTSMAN GREAT LAKES TRADE BAITCAST REEL-ANTIQUE-old-$ 1 Bid $9.98
+$10.00 3d 12h 47m
ZENITH LONG DISTANCE WAVE MAGNET SUITCASE TUBE RADIO-$$ 0 Bids $24.99
+$25.00 2d 12h 47m
RCA M1-12115-A VINTAGE AM/FM RECEIVER-MONO TUBE AMPED-$ 0 Bids $9.98
+$20.00 4d 12h 47m
FIRESTONE MODEL S-7403-3 WOOD RADIO-TUBES-parts/fix-$$$ 0 Bids $24.99
+$25.00 2d 12h 47m
MUNTZ 4-TRACK CARTRIDGE STEREO TAPE DECK W/MOUNT-NICE-$ 0 Bids $24.99
$100.00
+$30.00 2d 12h 47m
SHOTGUN/RIFLE ? FOREARM STOCK-CHECKERED-FINISHED-#04291 1 Bid $9.98
+$5.00 4d 12h 47m
NUMARK HU-235R STUDIO MONITOR HEADPHONES-VINTAGE-parts- 0 Bids $9.98
+$10.00 4d 12h 47m
1965-67 CHEVY CORVETTE VERTICAL PUSHBUTTON RADIO-$$$$$$ 0 Bids $9.98
+$10.00 4d 12h 47m
1950s BUICK GM SONOMATIC TUBE AMPED DASH RADIO-fix/part 0 Bids $9.98
+$10.00 4d 12h 47m
ANTIQUE HAVANA HARBOR CIGAR BOX RADIO-UPMANN-DUNHILL-$$ 0 Bids $9.98
+$10.00 4d 12h 47m
STEWART ANTIQUE PHONOGRAPH-EARLY 1900's-parts/restore-$ 0 Bids $24.99
+$35.00 2d 12h 47m
RCA SOUNDTAPE MAGAZINE LOADED CASSETTE RECORDER-SCP2-$$
STEREO SINGLE ENDED TUBE AMP INSIDE W/6V6'S-VINTAGE AMP 1 Bid $99.88
+$50.00 2d 12h 47m
VINTAGE DEVRY RF GENERATOR-P/N32000-SERIAL#105-vg cond. 0 Bids $9.98
+$25.00 4d 12h 47m
HUGE PANASONIC RS-888S QUAD RECEIVER-8TRACK-CASSETTE-$$
RECORD/PLAY STEREO/QUAD 8TRACK/CASSETTE-120/220 VOLTS-$ 0 Bids $49.98
+$35.00 4d 12h 47m
OLD LAFAYETTE COMSTAT-25 CITIZENS BAND TRANSCEIVER-TUBE 0 Bids $24.99
+$20.00 4d 12h 47m
(2) OEM GM CHEVROLET PUSHBUTTON RADIOS-1960's-CHROME-$$ 0 Bids $9.98
+$20.00 4d 12h 47m
(2) 1964 DODGE DELUXE RADIOS w/PLASTIC DASH PLATE BEZEL
"ALL TRANSISTOR" PUSHBUTTON RADIOS-413-426HEMI-440-$$$$ 0 Bids $24.99
+$20.00 4d 12h 47m
SILVERTONE MODEL 7104 ANTIQUE WOOD RADIO w/tubes-NICE-$ 0 Bids $24.99
+$35.00 3d 12h 47m
LAFAYETTE MODEL HB-111 VINTAGE TUBE AMPED CB RADIO-$$$$ 0 Bids $9.98
+$25.00 3d 12h 47m

AIR KING MODEL 4602 WOODEN RADIO W/TUBES-parts/restore- 0 Bids $24.99
+$35.00 3d 12h 47m
RCA VICTOR MOD. 96T7 WOODEN RADIO W/TUBES-PARTS/RESTORE 0 Bids $24.99
+$35.00 3d 12h 47m
ADMIRAL MOD.6RT43A-5B1A radio/phono-vintage-tubes-78rpm 0 Bids $24.99
+$35.00 3d 12h 47m
HEATHKIT VIBRATION TESTER MODEL VT-1 VINTAGE-antique-$$ 1 Bid $9.98
+$15.00 3d 12h 47m
(2) MINIATURE VINTAGE RADIO/PHONOGRAPHS-VG CONDITION-$$ 0 Bids $24.99
+$25.00 3d 12h 47m
VINTAGE SONY MINI TRANSISTOR RADIO-CRAIG CASSETTE-MORE- 0 Bids $9.98
+$20.00 4d 12h 47m
(2) AIWA PORTABLE 2-TRACK R2R RECORDERS-TP703-TP705-$$$ 0 Bids $24.99
+$35.00 4d 12h 47m
VINTAGE RCA MODEL NINE CITIZENS BAND TRANSCEIVER-TUBES- 1 Bid $9.98
+$20.00 4d 15h 47m
HEATHKIT PRECISION FIELD STRENGTH CRYSTAL TUNE WAVE-??
SOME SORT OF ANTENNA BOOSTER/HOMING DEVICE-L@@K-$$$$$$$ 0 Bids $9.98
+$25.00 4d 12h 47m
SILVERTONE STEREO SINGLE ENDED TUBE AMP w/REVERB UNIT-$
2)12AX7's drive 2)6BQ5's w/FACEPLATE-KNOBS-CORDS-TUBES- 0 Bids $149.88
$300.00
+$40.00 9d 12h 47m
3 INTERNATIONAL SILVER CO FLAGSHIP ANGLED ANTIQUE FORKS 0 Bids $9.98
+$5.00 9d 12h 47m
TEXTRON DUAL BEAM OSCILLOSCOPE MODEL N180 DUAL BEAM-$$$ 0 Bids $24.99
+$150.00 9d 12h 47m

## 1050. update to project notebook

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-27 06:22:02 UTC
From: cloughbrengle@gmail.com
Message-ID: <4772306a-76b9-4a0f-9d58-9b025c2799ab@a70g2000hsh.googlegroups.com>
Source record: 4787

I've made a new entry to the homebrew project notebook page.
http://radioheaven.homestead.com/HomeBrewRX.html
Check it out if you're interested.

73, Ron W4RON

http://radioheaven.homestead.com/index.html
http://cloughbrengle.homestead.com/

# 1051. Re: HUGE lot estate clearance-antique radios-phonos-test equip-mics-Grigsby-Grunow, Philco, Majestic, Wards Airline, consoles, tabletops, cathedral, tombstone, bakelite, wooden, plastic-much more- over 50 items listed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-27 11:19:34 UTC
From: "Dwight D. Eisenhower" <rottedHonda@yahoo.com>
Message-ID: <3c5c9e56-6696-4e9e-9ce2-db86d64c0883@34g2000hsh.googlegroups.com>
Source record: 4788

```
On Jul 26, 8:52 am, ANTIQUE AUDIO <matthew.bun...@yahoo.com> wrote:
> updated list
>
> http://shop.ebay.com/merchant/66-catalina_W0QQ_nkwZQQ_armrsZ1QQ_fromZ...
>
> WWII SIGNAL CORPS LANTERN-U.S.ARMY-MX290GV-VINTAGE-$$$$ 0 Bids $24.99
> $45.00
> Free 2d 12h 47m
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> Free 2d 12h 47m
>  PHILCO MODEL 66 WOODEN TOMBSTONE ANTIQUE RADIO-TUBES-$$ 0 Bids $49.98
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>  AMPEX MICRO 85 STEREO CASSETTE RECORDER-INTEGRATED AMP-
> MADE IN AUSTRIA-VINTAGE HIGH END DECK w/120 VAC MOTOR-$ 0 Bids $24.99
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> +$20.00 2d 12h 47m
>  LOT OF (14) OLD PLASTIC-BAKELITE-ANTIQUE TUBE RADIOS-$$ 0 Bids $99.88
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>  1930's WOODEN RADIO CATHEDRAL EXTERNAL SPEAKER-ANTIQUE- 1 Bid $24.99
> +$20.00 2d 12h 47m
>  (6) RCA SOUNDTAPE MAGAZINE LOADED LARGE CASSETTE TAPES- 0 Bids $24.99
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>  STEWART-WARNER MOD 07-5R5 ANTIQUE TUBE WOODEN RADIO-old 0 Bids $24.99
> +$20.00 3d 12h 47m
>  VINTAGE LIONEL-MULTI CONTROL TRAINMASTER TRANSFORMER-$$
> 25 VOLT OUTPUT w/ WHISTLE, DIRECTION, SPEED CONTROLS-VG 0 Bids $24.99
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```

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>  JULIETTE TOPPLAY CARTRIDGE PLAYER-2 TRACK ENDLESS LOOP-
> SIMILAR TO PLAYTAPE-RARE VINTAGE AUDIO FORMAT PLAYER-$$ 0 Bids $9.98
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> +$10.00 3d 12h 47m
>  ZENITH LONG DISTANCE WAVE MAGNET SUITCASE TUBE RADIO-$$ 0 Bids $24.99
> +$25.00 2d 12h 47m
>  RCA M1-12115-A VINTAGE AM/FM RECEIVER-MONO TUBE AMPED-$ 0 Bids $9.98
> +$20.00 4d 12h 47m
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> $100.00
> +$30.00 2d 12h 47m
>  SHOTGUN/RIFLE ? FOREARM STOCK-CHECKERED-FINISHED-#04291 1 Bid $9.98
> +$5.00 4d 12h 47m
>  NUMARK HU-235R STUDIO MONITOR HEADPHONES-VINTAGE-parts- 0 Bids $9.98
> +$10.00 4d 12h 47m
>  1965-67 CHEVY CORVETTE VERTICAL PUSHBUTTON RADIO-$$$$$$ 0 Bids $9.98
> +$10.00 4d 12h 47m
>  1950s BUICK GM SONOMATIC TUBE AMPED DASH RADIO-fix/part 0 Bids $9.98
> +$10.00 4d 12h 47m
>  ANTIQUE HAVANA HARBOR CIGAR BOX RADIO-UPMANN-DUNHILL-$$ 0 Bids $9.98
> +$10.00 4d 12h 47m
>  STEWART ANTIQUE PHONOGRAPH-EARLY 1900's-parts/restore-$ 0 Bids $24.99
> +$35.00 2d 12h 47m
>  RCA SOUNDTAPE MAGAZINE LOADED CASSETTE RECORDER-SCP2-$$
> STEREO SINGLE ENDED TUBE AMP INSIDE W/6V6'S-VINTAGE AMP 1 Bid $99.88
> +$50.00 2d 12h 47m
>  VINTAGE DEVRY RF GENERATOR-P/N32000-SERIAL#105-vg cond. 0 Bids $9.98
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> RECORD/PLAY STEREO/QUAD 8TRACK/CASSETTE-120/220 VOLTS-$ 0 Bids $49.98
> +$35.00 4d 12h 47m
>  OLD LAFAYETTE COMSTAT-25 CITIZENS BAND TRANSCEIVER-TUBE 0 Bids $24.99
> +$20.00 4d 12h 47m
>  (2) OEM GM CHEVROLET PUSHBUTTON RADIOS-1960's-CHROME-$$ 0 Bids $9.98
> +$20.00 4d 12h 47m
>  (2) 1964 DODGE DELUXE RADIOS w/PLASTIC DASH PLATE BEZEL
> "ALL TRANSISTOR" PUSHBUTTON RADIOS-413-426HEMI-440-$$$$ 0 Bids $24.99
> +$20.00 4d 12h 47m
>  SILVERTONE MODEL 7104 ANTIQUE WOOD RADIO w/tubes-NICE-$ 0 Bids $24.99
> +$35.00 3d 12h 47m

>  LAFAYETTE MODEL HB-111 VINTAGE TUBE AMPED CB RADIO-$$$$ 0 Bids $9.98
> +$25.00 3d 12h 47m
>  AIR KING MODEL 4602 WOODEN RADIO W/TUBES-parts/restore- 0 Bids $24.99
> +$35.00 3d 12h 47m
>  RCA VICTOR MOD. 96T7 WOODEN RADIO W/TUBES-PARTS/RESTORE 0 Bids $24.99
> +$35.00 3d 12h 47m
>  ADMIRAL MOD.6RT43A-5B1A radio/phono-vintage-tubes-78rpm 0 Bids $24.99
> +$35.00 3d 12h 47m
>  HEATHKIT VIBRATION TESTER MODEL VT-1 VINTAGE-antique-$$ 1 Bid $9.98
> +$15.00 3d 12h 47m
>  (2) MINIATURE VINTAGE RADIO/PHONOGRAPHS-VG CONDITION-$$ 0 Bids $24.99
> +$25.00 3d 12h 47m
>  VINTAGE SONY MINI TRANSISTOR RADIO-CRAIG CASSETTE-MORE- 0 Bids $9.98
> +$20.00 4d 12h 47m
>  (2) AIWA PORTABLE 2-TRACK R2R RECORDERS-TP703-TP705-$$$ 0 Bids $24.99
> +$35.00 4d 12h 47m
>  VINTAGE RCA MODEL NINE CITIZENS BAND TRANSCEIVER-TUBES- 1 Bid $9.98
> +$20.00 4d 15h 47m
>  HEATHKIT PRECISION FIELD STRENGTH CRYSTAL TUNE WAVE-??
> SOME SORT OF ANTENNA BOOSTER/HOMING DEVICE-L@@K-$$$$$$$ 0 Bids $9.98
> +$25.00 4d 12h 47m
>  SILVERTONE STEREO SINGLE ENDED TUBE AMP w/REVERB UNIT-$
> 2)12AX7's drive 2)6BQ5's w/FACEPLATE-KNOBS-CORDS-TUBES- 0 Bids $149.88
> $300.00
> +$40.00 9d 12h 47m
>  3 INTERNATIONAL SILVER CO FLAGSHIP ANGLED ANTIQUE FORKS 0 Bids $9.98
> +$5.00 9d 12h 47m
>  TEXTRON DUAL BEAM OSCILLOSCOPE MODEL N180 DUAL BEAM-$$$ 0 Bids $24.99
> +$150.00 9d 12h 47m

HUGE lot antique radios-estate clearance

updated list

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZ66Q2dcatalina

16 TAPES LOT 4-TRACK CARTRIDGES-SINATRA-PETER,PAUL,MARY 1 $24.99
Free 1d 14h 24m
WWII SIGNAL CORPS LANTERN-U.S.ARMY-MX290GV-VINTAGE-$$$$ -
$24.99
$45.00
Free 1d 14h 24m
(2) SCOTCH 10" DIAMETER, 1/4" WIDE MAGNETIC TAPE REELS- -
$9.98
$15.00
Free 9d 14h 24m
PHILCO MODEL 66 WOODEN TOMBSTONE ANTIQUE RADIO-TUBES-$$ -
$49.98
$250.00
$40.00 1d 14h 24m
ANTIQUE CUNNINGHAM WOOD RADIO w/TUBES-parts/fix/restore 1 $24.99

$20.00 1d 14h 24m
PHILCO VINTAGE BAKELITE TELEVISION BOOSTER BOX-COMPLETE - $9.98
$10.00 1d 14h 24m
AMPEX MICRO 85 STEREO CASSETTE RECORDER-INTEGRATED AMP-
MADE IN AUSTRIA-VINTAGE HIGH END DECK w/120 VAC MOTOR-$
-
$24.99
$50.00
$20.00 1d 14h 24m
1930's WOODEN RADIO CATHEDRAL EXTERNAL SPEAKER-ANTIQUE- 1 $24.99
$20.00 1d 14h 24m
(6) RCA SOUNDTAPE MAGAZINE LOADED LARGE CASSETTE TAPES- -
$24.99
$125.00
$10.00 1d 14h 24m
LOT OF (14) OLD PLASTIC-BAKELITE-ANTIQUE TUBE RADIOS-$$ - $99.88
$100.00 1d 14h 24m
ANTIQUE WOODEN ASTATIC TV STATION CONTROLLER-1940-50's- - $9.98
$10.00 2d 12h 50m
VINTAGE RCA MODEL MI-12016G MICROPHONE w/CORD-rare-$$$$ 4 $20.50
$10.00 2d 14h 24m
(3) VINTAGE WALKIE-TALKIE CB RADIOS-ASSORTED MAKES-$$$$ - $9.98
$10.00 2d 14h 24m
VINTAGE LIONEL-MULTI CONTROL TRAINMASTER TRANSFORMER-$$
25 VOLT OUTPUT w/ WHISTLE, DIRECTION, SPEED CONTROLS-VG
- $24.99
$15.00 2d 14h 24m
STANDARD BRAND AM/FM STEREO TUNER-VINTAGE COMPONENT-$$$ - $9.98
$15.00 2d 14h 24m
STEWART-WARNER MOD 07-5R5 ANTIQUE TUBE WOODEN RADIO-old 1 $24.99
$20.00 2d 14h 24m
SPORTSMAN GREAT LAKES TRADE BAITCAST REEL-ANTIQUE-old-$ 1 $9.98
$10.00 2d 14h 24m
WIPER MOTOR LINKAGE-GTO-CHEVELLE-GRAN SPORT-442-SKYLARK
CUTLASS-F85-SPECIAL-JUDGE-GT37-T37-MALIBU-SS396-SS454-$
- $9.98
$10.00 2d 14h 24m
BENDIX SAPPHIRE II ANTIQUE CAR RADIO-WHITE BUTTONS-part 2 $10.98
$10.00 2d 14h 24m
VINTAGE ASTATIC D-104 MIC w/UG8 CHROME STAND-classic-$$ 2 $10.50
$10.00 2d 14h 24m
JULIETTE TOPPLAY CARTRIDGE PLAYER-2 TRACK ENDLESS LOOP-
SIMILAR TO PLAYTAPE-RARE VINTAGE AUDIO FORMAT PLAYER-$$
- $9.98
$10.00 2d 14h 24m
(2) 1964 DODGE DELUXE RADIOS w/PLASTIC DASH PLATE BEZEL
"ALL TRANSISTOR" PUSHBUTTON RADIOS-413-426HEMI-440-$$$$
- $24.99
$20.00 3d 14h 24m
VINTAGE DEVRY RF GENERATOR-P/N32000-SERIAL#105-vg cond. - $9.98

$25.00 3d 14h 24m
OLD LAFAYETTE COMSTAT-25 CITIZENS BAND TRANSCEIVER-TUBE - $24.99
$20.00 3d 14h 24m
ANTIQUE HAVANA HARBOR CIGAR BOX RADIO-UPMANN-DUNHILL-$$ - $9.98
$10.00 3d 14h 24m

1965-67 CHEVY CORVETTE VERTICAL PUSHBUTTON RADIO-$$$$$$ - $9.98
$10.00 3d 14h 21m
NUMARK HU-235R STUDIO MONITOR HEADPHONES-VINTAGE-parts- - $9.98
$10.00 3d 14h 21m
SHOTGUN/RIFLE ? FOREARM STOCK-CHECKERED-FINISHED-#04291 1 $9.98
$5.00 3d 14h 21m
HUGE PANASONIC RS-888S QUAD RECEIVER-8TRACK-CASSETTE-$$
RECORD/PLAY STEREO/QUAD 8TRACK/CASSETTE-120/220 VOLTS-$
- $49.98
$35.00 3d 14h 21m
1950s BUICK GM SONOMATIC TUBE AMPED DASH RADIO-fix/part - $9.98
$10.00 3d 14h 21m
RCA M1-12115-A VINTAGE AM/FM RECEIVER-MONO TUBE AMPED-$ - $9.98
$20.00 3d 14h 21m
(2) OEM GM CHEVROLET PUSHBUTTON RADIOS-1960's-CHROME-$$ - $9.98
$20.00 3d 14h 21m
SILVERTONE STEREO SINGLE ENDED TUBE AMP w/REVERB UNIT-$
2)12AX7's drive 2)6BQ5's w/FACEPLATE-KNOBS-CORDS-TUBES-
-
$149.88
$300.00
$40.00 8d 14h 21m
3 INTERNATIONAL SILVER CO FLAGSHIP ANGLED ANTIQUE FORKS - $9.98
$5.00 8d 14h 21m
MAGNAVOX COLLARO MODEL TP264C ANTIQUE TUBE PHONOGRAPH-$ - $24.99
$45.00 8d 14h 21m
CHRYSLER CARTER 4-BARREL AVS CARBURETOR 4682S 3548 95-$
SUPER BEE-ROADRUNNER-383 HP MAGNUM-750 CFM-MUSCLECARB-$
- $24.99
$15.00 9d 14h 21m
(2) VINTAGE CRAFTSMAN AIR PAINT SPRAY GUNS-pressurefeed - $9.98
$10.00 9d 14h 21m
ZENITH LONG DISTANCE WAVE MAGNET SUITCASE TUBE RADIO-$$ - $24.99
$25.00 1d 14h 21m
MUNTZ 4-TRACK CARTRIDGE STEREO TAPE DECK W/MOUNT-NICE-$ -
$24.99
$100.00
$30.00 1d 14h 21m
STEWART ANTIQUE PHONOGRAPH-EARLY 1900's-parts/restore-$ - $24.99
$35.00 1d 14h 21m
FIRESTONE MODEL S-7403-3 WOOD RADIO-TUBES-parts/fix-$$$ - $24.99
$25.00 1d 14h 21m
RCA SOUNDTAPE MAGAZINE LOADED CASSETTE RECORDER-SCP2-$$
STEREO SINGLE ENDED TUBE AMP INSIDE W/6V6'S-VINTAGE AMP

1 $99.88
$50.00 1d 14h 21m
LAFAYETTE MODEL HB-111 VINTAGE TUBE AMPED CB RADIO-$$$$ - $9.98
$25.00 2d 14h 21m
AIR KING MODEL 4602 WOODEN RADIO W/TUBES-parts/restore- - $24.99
$35.00 2d 14h 21m
RCA VICTOR MOD. 96T7 WOODEN RADIO W/TUBES-PARTS/RESTORE - $24.99
$35.00 2d 14h 21m
HEATHKIT VIBRATION TESTER MODEL VT-1 VINTAGE-antique-$$ 1 $9.98
$15.00 2d 14h 21m
SILVERTONE MODEL 7104 ANTIQUE WOOD RADIO w/tubes-NICE-$ - $24.99
$35.00 2d 14h 21m
ADMIRAL MOD.6RT43A-5B1A radio/phono-vintage-tubes-78rpm - $24.99
$35.00 2d 14h 21m
(2) MINIATURE VINTAGE RADIO/PHONOGRAPHS-VG CONDITION-$$ - $24.99
$25.00 2d 14h 21m
HEATHKIT PRECISION FIELD STRENGTH CRYSTAL TUNE WAVE-??
SOME SORT OF ANTENNA BOOSTER/HOMING DEVICE-L@@K-$$$$$$$
- $9.98
$25.00 3d 14h 21m

(2) AIWA PORTABLE 2-TRACK R2R RECORDERS-TP703-TP705-$$$ - $24.99
$35.00 3d 14h 20m
VINTAGE SONY MINI TRANSISTOR RADIO-CRAIG CASSETTE-MORE- - $9.98
$20.00 3d 14h 20m
VINTAGE RCA MODEL NINE CITIZENS BAND TRANSCEIVER-TUBES- 1 $9.98
$20.00 3d 17h 20m
WARDS AIRLINE 62-479, GRIGSBY-GRUNOW MAJESTIC 20-radios
PHILCO MODELS 48-1262, 46-1209-ANTIQUE AM/SW COLLECTION
-
$499.88
$900.00
Pickup only 8d 14h 20m
TEXTRON DUAL BEAM OSCILLOSCOPE MODEL N180 DUAL BEAM-$$$ - $24.99
$150.00 8d 14h 20m

updated list

## 1052. SOLA Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-27 11:40:12 UTC
From: jimmie68@gmail.com
Message-ID: <0ab4170d-4c13-409c-a627-d23cd05e9739@79g2000hsk.googlegroups.com>
Source record: 4789

I have a few SOLA brick type power supplies that were given to me. I am looking for schematics so I can repair them. On some the problems were pretty obvious. Bad filter caps, rectifiers pass transistors. These were easy to repair. I suspect they are all type 723 regulator based but I am not absolutely sure as one power supply has an IC that is clearly an op-amp, this does not appear to be an origonal chip. Other power supplies have parts missing. Any help would be greatly appreciated.

Jimmie.

# 1053. FA: SMA Male to Type N Male, RG-223/U, 6 inches, Cable Assembly,

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-28 18:58:04 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <d946d6b0-729d-44c2-bdf4-13c4992fb1e9@x41g2000hsb.googlegroups.com>
Source record: 4790

FA: 4 BRAND NEW AAA RF Products SMA Male to Type N Male Cable Assembly
using Military Type Double Shielded, Silver Plated RG-223/U Coax 6
inches Long. Assembled in the USA. AAA RF Part Number AAA1058-6

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=190239295615

For complete CATALOG Go to.

http://www.aaarfproducts.com/catalog/AARFBROCHURE01-08.pdf

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1054. free laptops computers go to website view

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-29 13:14:31 UTC
From: bala <ragavan.cs@gmail.com>
Message-ID: <669c85a7-e42d-4370-8c4d-8b4c67bcf2b1@i24g2000prf.googlegroups.com>
Source record: 4791

http://www.healthnews5.blogspot.com/

# 1055. FA: 5 Type N Male to N Male RG-400/U 15 inches

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-29 16:14:31 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <7951d1cb-56bc-4ea2-a5fb-b684cb09f805@j22g2000hsf.googlegroups.com>
Source record: 4792

FA: 5 Type N Male to N Male RG-400/U 15 inches

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=190239297654

For complete CATALOG Go to.

http://www.aaarfproducts.com/catalog/AARFBROCHURE01-08.pdf

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1056. FA: 2 BNC Male to Alligator Clips RG-58C/U, 60 inch,

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-29 23:13:47 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <4eb53b9b-9ad0-4f78-b56f-8c994add08bb@l42g2000hsc.googlegroups.com>
Source record: 4793

FA: 2 BNC Male to Alligator Clips RG-58C/U, 60 inch,

Please Follow Auction Link:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=190240425020

For complete CATALOG Go to.

http://www.aaarfproducts.com/catalog/AARFBROCHURE01-08.pdf

Please Email me if you want to be added to our mailing list to receive
quarterly Catalogs

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1057. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-30 03:14:43 UTC
From: Tom <holden_family@sympatico.ca>
Message-ID: <1033a23b-2c66-49ca-bb98-5703be6a2706@t54g2000hsg.googlegroups.com>
Source record: 4794
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jun 12, 11:35 am, Telstar Electronics <briangrif...@sbcglobal.net>
wrote:
> > As I said. "Obviously they have to contain 'all the works' (oscillator,
> > balanced modulator, compressor, clipper, filters, balanced demodulator
> > etc)."
>
> That sounds very complex and expensive all right.
> Another problem I see is that they only work on SSB.
> My customers insist on something small that fits inside the radio and
> processes in all modes. The VoiceMax does that with less than 1% THD.
> Can't build them fast enough to keep them in stock...

DF4ZS developed a RF speech clipper that fits into the Yaesu MH-31
microphone shell. This mic is used with the popular, tiny FT-817
transceiver along with others and in all speech modes. His clipper has
a SSB IF.

Details: http://jwm.de/afu/0ft817eng.htm
Reviews: http://www.eham.net/reviews/detail/2732 (6)

There are no reviews of the VoiceMax on eham.net while there are 21 of
the W4RT Electronics "One Big Punch" which uses a similar IC and can
be installed either in the MH-31 or inside the case of the FT-817 et
al.

DF4ZS also makes an outboard RF Clipper with adjustable a.f.
compression and integrated noise gate.

If you don't mind tying up a computer to do your speech processing,
VE3NEA developed freeware to work with a soundcard between the mic and
the transmitter that functions as bandpass filter, 7-band equalizer,
noise gate, compressor, and RF envelope clipper. http://www.dxatlas.com/VShaper/

# 1058. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-30 12:03:30 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <8f09fc76-04c8-4d98-85db-2db433e50f3c@e39g2000hsf.googlegroups.com>
Source record: 4795
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Jul 29, 10:14 pm, Tom <holden_fam...@sympatico.ca> wrote:
> DF4ZS developed a RF speech clipper that fits into the Yaesu MH-31
> microphone shell. This mic is used with the popular, tiny FT-817
> transceiver along with others and in all speech modes. His clipper has
> a SSB IF.
>
> Details:http://jwm.de/afu/0ft817eng.htm
> Reviews:http://www.eham.net/reviews/detail/2732(6)
>
> There are no reviews of the VoiceMax on eham.net while there are 21 of
> the W4RT Electronics "One Big Punch" which uses a similar IC and can
> be installed either in the MH-31 or inside the case of the FT-817 et
> al.
>
> DF4ZS also makes an outboard RF Clipper with adjustable a.f.
> compression and integrated noise gate.

This DF4ZS is a clipping type processor... nothing like the VoiceMax audio compressor. You are correct, Since VoiceMax is a new product and there are only about 150 units in use worldwide... so far there are no reviews on Eham. Thanks for your interesting comments.
www.telstar-electronics.com

## 1059. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-31 00:36:26 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <CO7kk.1134$3l5.125@newsfe06.iad>
Source record: 4796
Cross-posted to: rec.radio.cb,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message This DF4ZS is a clipping type processor... nothing like the VoiceMax audio compressor.

That is true. SSB RF clipping is proven to deliver an honest 6 dB improvement.

# 1060. ONLINE RESOURCE FOR HELP DESK SOFTWARE

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-07-31 11:28:21 UTC
From: hpeeeter5@gmail.com
Message-ID: <98289208-cd13-46ff-938f-262029ab2e83@z6g2000pre.googlegroups.com>
Source record: 4797

ONLINE RESOURCE FOR HELP DESK SOFTWARE

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

http://helpdesksoftwaremanagement.blogspot.com

# 1061. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-03 21:19:24 UTC
From: "KnobGobblerMorkie@Mail2Princess.Com" <KnobGobblerMorkie@mail2princess.com>
Message-ID: <c13d99b5-d12d-402b-ad30-ac866cf33622@59g2000hsb.googlegroups.com>
Source record: 4798
Cross-posted to: alt.usenet.kooks,rec.radio.shortwave,rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.homebrew

On Jul 30, 7:36 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> "Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message This
>
> DF4ZS is a clipping type processor... nothing like the VoiceMax
> audio compressor.
>
> That is true. SSB RF clipping is proven to deliver an honest 6 dB
> improvement.

Remember way back when this was posted?
Dam..... I wish YZ the great one was still posting here!!

<PROCEEDING> 98-143
<DATE> 11.27.98
<NAME> STEVEN JAMES ROBESON
<ADDRESS1> HCR65 BOX 572
<ADDRESS2> POB 2103
<CITY> DUNLAP
<STATE> TN
<ZIP> 37327
<LAW FIRM> NONE
<ATTORNEY> NONE
<FILE NUMBER> NONE
<DOCUMENT-TYPE> CO
<CONFIDENTIAL> N
<PHONE NUMBER> (???) -???-????
<DESCRIPTION> Comments on WT 98-143
<NOTIFY> erlpnk...@aol.com
<TEXT>

To the Members of the Commission Assembled:

I am Steven Robeson. I have been a licensee in the Amateur Radio
Service
since 1972 and am presently the licensee of Amateur Radio Station K4YZ
and hold
an Amateur Extra Class Operators license. I comment to you today on
the matter
of WT 98-143.

There can be no doubt that there has been quantum leaps in the
field of
radiocommunication since the last major rewrite of Part 97. This
includes the
"Incentive Licensing" system that was implemented in the late 1960's.

It is
clearly time to change the system.

The Commission has solicited comments relative to that
circumstance, and I
hope the following will be considered in that act.

First of all, I would like to wholeheartedly approve of the
concept of
reducing the number of Amateur License classes from six to four.
There is much
confusion as to "who's who" as it is now, and a reduction in the
licensing
process would alleviate that disparity. As such, I envision the
following as
being appropriate for said restructuring:

Amateur Class D: The Amateur Class D license would become the de
facto
"entry class" license for the Amateur Service. In light of the
grossly
decreased demand for the Novice License and reduced useage of the sub-
bands
allocated for thier use, I would deactivate it as the "entry class"
licenese.
The Class D License would for all intents and purposes be the same as
the
current "Codeless Technician" class license. The examination for this
license
would remove questions pertaining to HF (1.8 to 30 MHZ) theory and
operation,
and be strictly limited to matters pertaining to VHF/UHF theory and
operation,
regulatory matters and Amateur practice. All Amateur privileges above
30 MHZ
would be conveyed to the successful applicant.

Amateur Class C: The Class C license would be the entry level
license for
operation on the HF spectrum. It would require the successful
applicant either
hold a Class D license, or successfully complete the Class D
examination in
addition to an examination on basic HF theory, propagation and
practice. It
would also require an examination in proficiency in the sending and
receiving
of Morse Code at a speed of not more than 5 (five) words per minute.
Persons
presently holding a Novice Class License or Technician Plus license
would be

grandfathered into this class of license, except that they would be required to
take a 20 question open book examination at a VE Testing Session on the
privileges and restrictions of the Class C License prior to utilizing those
privileges. Allocations would include those presently enjoyed by the Amateur
General Class licensee except for operation of the 160, 30, 17 and 12 meter
bands.

Class B: The Class B license would incorporate the present Amateur
General and Amateur Advanced license. All amateur priviledges as are presently
enjoyed by the Amateur Advanced would be authorized with Amateur General's
being grandfathered into Class B. New licensee's would be required to pass a
written examination on advanced radio frequency technology, amateur practice,
regulations and an examination in proficiency in the sending and receiving of
Morse Code at a rate of not more than 12 (twelve) words per minute. This would
be consistent with the present CEPT program, which the United States is
presently negotiating membership in. Additional frequency allocations would be
authorized by the "refarming" of the subbands presently allocated to the Novice
Class, and divided with the Class A license.

Class A: The Amateur Class A would convey all Amateur operating
privileges to the successfull applicant. Present subband authorizations
enjoyed in the "CW" bands would be unchanged and new exclusive phone
allocations for the Class A would be "refarmed" from the deactivated Novice
license and by rellocating from the "high" end of present CW allocations where
operation is sparse. A quick scanning of those portions of the spectrum will
demonstrate that minimal use is made of this portion of the authorized
allocations and reallocation to "phone" or other "wideband" emission types is
reasonable.

The Class A applicant will demonstrate advance/expert level knowledge of RF technology and Amateur practice. No additional Morse Code examination would be required.

To further simplify the administrative process of the Commission, I would discontinue the present "sequential" callsign system. Upon successful passing of the requirements for an Amateur Examination, the applicant would be issued a "2 by 3" callsign (ie: KA4AAA) by the Commission. Those wishing to specifically select a callsign of a particular format would be provided that opportunity by the "Vanity" callsign system. The Commission would specify those formats of callsigns permitted by class, but it would be up to the applicant to chose the desired call, and appropriate fee paid for the privilege of obtaining said call.

As for the occassionally emotional debate on the retention of the Morse Code requirement, I am steadfastly in favor of retention of the use of Morse Code and demonstration of it's use for the Amateur Service. Among it's prouder traditions has been the Amateur's ability to communicate across international boarders and foster communication between citizens in countries which may not have a common language in which to conduct that communication. Morse Code is the "common denominator" in international communications and should be retained.

As for the arguement that more efficient or reliable methods of communication exist, it is a time proven fact that the simplicity of Morse Code systems has allowed us to communicate with portions of the world that cannot enjoy the same level of access to technology that we as American's enjoy.

And to echo the comments of another commentor to these proceedings, I would like to express my concern over the decline of the overall technical skill and knowledge of the average Amateur. I firmly believe that

this is the
direct result of the publishing of Amateur Radio question and answer
test pools
in the public domain. I feel it is as rediculous a concept as for our
schools
to prepublish the questions and answers of mid-terms and finals.
Closing the
pools except to the VEC's, the Commission, and an independent
oversight
committee approved by the Commission would go a long way towards
ensuring that
the successful applicant has a minimal and sufficient retention of
the
requisite knowledge for an Amateur license.

Lastly, I would consider all of this for naught if the Commission
were to
fail to make a determined and on-going effort to enforce the rules
and
regulations as they pertain to the operation of Amatuer Radio
Stations. It is
an embarrasment that we are as frail as any other subset of human
society, and
we too have our share of ner'-do-wells and rabble-rousers. But unlike
a local
"protest" or civil disturbances in one localized area,
radiocommunication has
the potential of causing a disruption over a massive, if not world-
wide area,
even when that disruption is perpetrated by only a few "rotten
apples". The
Amateur Service still prides itself on it's own "self policing"
activities, and
this activity is unprecedented in any other Service under the
Commission's
domain, but only so much can be accomplished short of vigilanteism.
The Commission's assurance that they will enforce these regulations
and back it
up with action will be the one greatest action the Commission could
take.

Respectfully Submitted,

/s/ Steven James Robeson, LPN
Amateur Radio Staton K4YZ

## 1062. zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz zzzzzzzzzzzzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-03 22:49:44 UTC
From: an old friend <kb9rqz@hotmail.com>
Message-ID: <334740c3-1cce-426a-b61b-d3c36f1c3e4f@f36g2000hsa.googlegroups.com>
Source record: 4799
Cross-posted to: alt.usenet.kooks,rec.radio.shortwave,rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.homebrew

```
On Aug 3, 5:19 pm, "KnobGobblerMor...@Mail2Princess.Com"
<KnobGobblerMor...@mail2princess.com> wrote:
>
fake
```

## 1063. 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-03 23:37:00 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <4jrlk.3667$3l5.2335@newsfe06.iad>
Source record: 4800

Has anyone tried a 6JH8 in place of a 7360 for the
first mixer in a homebrew RX? How did they compare?

Pete

## 1064. eBay: HP 8411A

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-04 20:40:29 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <sPJlk.15688$cW3.5226@nlpi064.nbdc.sbc.com>
Source record: 4651
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,misc.industry.electronics.marketplace,sci.electronics.equipment,rec.radio.amateur.antenna

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=110276680571

# 1065. SPAM -- Do NOT cross-post to non-forsale groups

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-04 23:30:10 UTC
From: JeffM <jeffm_@email.com>
Message-ID: <8b743fe5-e98e-43c8-bcf5-ebefc4237f25@z72g2000hsb.googlegroups.com>
Source record: 4652
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,misc.industry.electronics.marketplace,sci.electronics.equipment,rec.radio.amateur.antenna

Henry Kolesnik wrote:
>cgi.ebay[SPAM]

# 1066. Re: 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-05 20:02:28 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <68e2ffeb-323d-40da-9e78-4c6f63ac3e91@56g2000hsm.googlegroups.com>
Source record: 4653

On Aug 3, 7:37 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> Has anyone tried a 6JH8 in place of a 7360 for the
> first mixer in a homebrew RX?  How did they compare?
>
> Pete

Well Eico uses a 7360 as a balanced modulator in my Eico 753. When it comes time to replace it I'm going with the TV set version, 6LE8 used as a chroma demodulator. I see the 6JH8 has an extra grid. I know you can use it but you are going to have to play with that extra grid it may not just go to ground, like most suppressor grids.

# 1067. Re: 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-05 20:53:15 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <F53mk.8593$Bt6.7231@newsfe04.iad>
Source record: 4654

"raypsi" <RBorowiak@gmail.com> wrote in message news:68e2ffeb- Well Eico uses a 7360 as a balanced modulator in my Eico 753. When it comes time to replace it I'm going with the TV set version, 6LE8 used as a chroma demodulator. I see the 6JH8 has an extra grid. I know you can use it but you are going to have to play with that extra grid it may not just go to ground, like most suppressor grids.

Transmitters don't worry about noise figure or dynamic range...
I'm more worried about how the different gated beam tubes will work in receiver applications.
Regarding your proposed mod, check this website:http://members.shaw.ca/pacifictv/cartridg.htm
The 6JH8 can be used in lieu of the 7360 by following the pin layouts shown on that page, as was done by Swan.

Pete

# 1068. Re: 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-06 16:33:58 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0808061231350.11957@darkstar.example.org>
Source record: 4655

On Tue, 5 Aug 2008, Tio Pedro wrote:

> Transmitters don't worry about noise figure or dynamic range...
> I'm more worried about how the different gated beam tubes will
> work in receiver applications.

I caught that point in your original post.

There were plenty of articles about using the other but cheaper
tubes similar to the 7360. But I'm not certain any I saw used
them as a first mixer. One could go back and check. And if
that's the case, either everyone just copied Squires 1963 article,
or there actually was a good reason to not use the cheaper variants
for the first mixer.

MIchael VE2BVW

# 1069. Re: 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-06 21:16:09 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <uwomk.6872$3l5.2987@newsfe06.iad>
Source record: 4656

"Michael Black" <et472@ncf.ca> wrote in message
news:Pine.LNX.4.64.0808061231350.11957@darkstar.example.org...
> On Tue, 5 Aug 2008, Tio Pedro wrote:
>
> There were plenty of articles about using the other but cheaper
> tubes similar to the 7360. But I'm not certain any I saw used
> them as a first mixer. One could go back and check. And if
> that's the case, either everyone just copied Squires 1963 article,
> or there actually was a good reason to not use the cheaper variants
> for the first mixer.
>
> MIchael VE2BVW
Hi Micheal

Most of the magic seems to be being able to generate push-pull LO
injection for the deflection plates, that along with the P-P output tank
balance, is critical for max. signal rejection at the mixer output. I do
have
a 1600kHz daytimer next town over (1st IF is1600 kc.)

I was thinking of using a trifiliar wound balun, driven by a cathode
follower
buffer of off the first LO, to provide the 3 volt RMS injection to the
deflection
plates. That should provide balanced drive voltages to each deflection
electrode? Squires never provided a lot of
detail on his coils or how they were made. A balun might provide a modern
solution for balanced P-P injection from otherwise single ended LO sources.

Pete

# 1070. Re: 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-06 22:19:30 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <eacc687f-9d1c-45fc-84cf-6484f7e5abd9@j22g2000hsf.googlegroups.com>
Source record: 4657

On Aug 5, 4:02 pm, raypsi <RBorow...@gmail.com> wrote:
> On Aug 3, 7:37 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
>
> > Has anyone tried a 6JH8 in place of a 7360 for the
> > first mixer in a homebrew RX? How did they compare?
>
> > Pete
>
> Well Eico uses a 7360 as a balanced modulator in my Eico 753. When it
> comes time to replace it I'm going with the TV set version, 6LE8 used
> as a chroma demodulator. I see the 6JH8 has an extra grid. I know you
> can use it but you are going to have to play with that extra grid it
> may not just go to ground, like most suppressor grids.

# 1071. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1218089100@panix.com>
Source record: 4658
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

## 1072. GU-81M linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-07 09:50:25 UTC
From: Stev eH <steveaaaqqqqqqqqqwwwwwwwwwweeeeeeeeeeerrrrrrrrrrrrttttttttttttttyyyyyyyyyyyyyyyyyyaaaaaaaaaaaassssssssssssssssddddddddddddddddddfffffffffffffgggggggggghhhhhhhhhhhhhhhhhhh@tfif.co.uk>
Message-ID: <g7eggv$q7v$1@news.albasani.net>
Source record: 4659

Has anyone used a GU-81M in a homebrew linear? I like the idea of building a quiet linear and this tube looks like it should do the job.

I've found very little info via google apart from a few wildly different specifications.

http://cgi.ebay.co.uk/GU-81M-GU81M-GU-81-M-GU81-Russian-Power-TUBE-NOS-in-BOX_W0QQitemZ310070893790QQcmdZViewItem?hash=item310070893790&_trksid=p3286.m63.l1177

Steve H

# 1073. Re: 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-07 13:50:59 UTC
From: "JRCCrabtree@gmail.com" <JRCCrabtree@gmail.com>
Message-ID: <1a67ef9b-11d3-4dcf-8530-3ff96535aa4d@f63g2000hsf.googlegroups.com>
Source record: 4660

On Aug 3, 6:37 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> Has anyone tried a 6JH8 in place of a 7360 for the
> first mixer in a homebrew RX? How did they compare?
>
> Pete

Back in the 1960's, Pat Hawker, G3VA reported (Amateur Radio
Techniques, Pat Hawker G3VA, 3rd ed, RSGB, p83) that Brian Booth,
G3SYC (SK ca. 2003), had used the 6JH8 beam deflection valve instead
of the 7360. Brian compared the two devices:
i) 6JH8 has a good deal more linear transfer characterisitic
ii) 6JH8 operates with the deflector plates at 0 volts, ie unnecessary
to bias to plus 25 Volts as per the 7360
iii) roughly similar transconductance 4400micromhos vs 5400micromhos
for the 7360
iv) 6JH8 has double the anode dissipation (3 watts)
v) then as now the 6JH8 is significantly cheaper.

The final comment was that Brian had used the 6JH8 as a receiver
mixer and also successfully as a mixer in transmitter circuits.

HTH and 73

John KC0G

# 1074. Re: 7360 or 6JH8 for first mixer?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-07 19:53:38 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <bplmk.13277$KZ.8227@newsfe03.iad>
Source record: 4661

<JRCCrabtree@gmail.com> wrote in message
news:1a67ef9b-11d3-4dcf-8530-3ff96535aa4d@f63g2000hsf.googlegroups.com...
On Aug 3, 6:37?pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> Has anyone tried a 6JH8 in place of a 7360 for the
> first mixer in a homebrew RX? ?How did they compare?
>
> Pete

Back in the 1960's, Pat Hawker, G3VA reported (Amateur Radio
Techniques, Pat Hawker G3VA, 3rd ed, RSGB, p83) that Brian Booth,
G3SYC (SK ca. 2003), had used the 6JH8 beam deflection valve instead
of the 7360. Brian compared the two devices:
i) 6JH8 has a good deal more linear transfer characterisitic
ii) 6JH8 operates with the deflector plates at 0 volts, ie unnecessary
to bias to plus 25 Volts as per the 7360
iii) roughly similar transconductance 4400micromhos vs 5400micromhos
for the 7360
iv) 6JH8 has double the anode dissipation (3 watts)
v) then as now the 6JH8 is significantly cheaper.

The final comment was that Brian had used the 6JH8 as a receiver
mixer and also successfully as a mixer in transmitter circuits.

HTH and 73

John KC0G

Great info, thanks! But I wonder how he achieved DC balance with
the deflectors set for 0 volts?

Pete

# 1075. need help finding correct switch for wearable radio project

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-08 00:28:23 UTC
From: "Ross, NS7F" <rjtucke@gmail.com>
Message-ID: <80f202e1-0f04-4bde-a482-4d6a953d201f@m44g2000hsc.googlegroups.com>
Source record: 4662

I am looking into making a kit based on the Small Wonder Labs Rockmite (http://smallwonderlabs.com/Rockmite.htm) designed to be a wearable short-range CW rig. My thought is to be able to wear it on an armband like joggers do with iPods. Anyway, I need to find some pretty specific parts, but I am having trouble finding them on Mouser, etc. I was wondering if perhaps a more experienced parts-hunter might kindly assist me in locating these.

My plan is to have everything except the earbud fit into/onto the chassis- 9V battery, telescoping/rubber duck antenna, and two pushbuttons for the key. Here is my list of parts that I need help with:

* 'key'- Rather than have paddles that stick out, I think it would be cool to use two pushbuttons on the top of the case, oriented so that you can press them while it's strapped to your other arm. My problem is that I need really shallow switch housings- my hope is to put this inside a pair of altoids tins attached back to back, and I'd really really like it if the key was more or less flush with the top of the chassis. I tried to surf Mouser, but there are kajillions out there and I can't seem to find something like this.

* control switch- see comments about about key, but I wouldn't mind if this stuck out a tiny bit.

* antenna- OK, so the final transistor is a 2222 at less than 1/2W. Does impedance mismatch even matter here? The obvious problem here is that I'm using HF... maybe I should use a ferrite loop? Can I even transmit on that? I'm really not looking for long distance here- maybe a mile or two. Any suggestions?

* volume/power - I was thinking of using Mouser 311-170-1-1M for the audio pot / power switch, but might there be a part that would be easier to mount? I'm guessing not, since I really want it to be a thumbwheel, but I thought I'd ask.

* frequency- Finally, since I'm not designing this system to be used long-range, maybe I should pick a really obscure frequency? What do you think? On one hand, if I used something in 80M, I would be unlikely ever to interfere with anybody, but that makes the antenna even more useless! Or should I pick 20M, maybe in the phone band? Please don't doubt that I will be very careful to ID legally and make sure to listen first, etc. But I just wanted to check...

Thank you for your time,
Ross Tucker, NS7F

# 1076. Re: need help finding correct switch for wearable radio project

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-08 15:28:38 UTC
From: JB <nospam@goofball.net>
Message-ID: <GCZmk.575$xv.449@trnddc02>
Source record: 4663

"Ross, NS7F" <rjtucke@gmail.com> wrote in message
news:80f202e1-0f04-4bde-a482-4d6a953d201f@m44g2000hsc.googlegroups.com...
> I am looking into making a kit based on the Small Wonder Labs Rockmite
> (http://smallwonderlabs.com/Rockmite.htm) designed to be a wearable
> short-range CW rig. My thought is to be able to wear it on an armband
> like joggers do with iPods. Anyway, I need to find some pretty
> specific parts, but I am having trouble finding them on Mouser, etc. I
> was wondering if perhaps a more experienced parts-hunter might kindly
> assist me in locating these.
>
> My plan is to have everything except the earbud fit into/onto the
> chassis- 9V battery, telescoping/rubber duck antenna, and two
> pushbuttons for the key. Here is my list of parts that I need help
> with:
>
> * 'key'- Rather than have paddles that stick out, I think it would be
> cool to use two pushbuttons on the top of the case, oriented so that
> you can press them while it's strapped to your other arm. My problem
> is that I need really shallow switch housings- my hope is to put this
> inside a pair of altoids tins attached back to back, and I'd really
> really like it if the key was more or less flush with the top of the
> chassis. I tried to surf Mouser, but there are kajillions out there
> and I can't seem to find something like this.
>
> * control switch- see comments about about key, but I wouldn't mind if
> this stuck out a tiny bit.
>
> * antenna- OK, so the final transistor is a 2222 at less than 1/2W.
> Does impedance mismatch even matter here? The obvious problem here is
> that I'm using HF... maybe I should use a ferrite loop? Can I even
> transmit on that? I'm really not looking for long distance here- maybe
> a mile or two. Any suggestions?
>
> * volume/power - I was thinking of using Mouser 311-170-1-1M for the
> audio pot / power switch, but might there be a part that would be
> easier to mount? I'm guessing not, since I really want it to be a
> thumbwheel, but I thought I'd ask.
>
> * frequency- Finally, since I'm not designing this system to be used
> long-range, maybe I should pick a really obscure frequency? What do
> you think? On one hand, if I used something in 80M, I would be
> unlikely ever to interfere with anybody, but that makes the antenna
> even more useless! Or should I pick 20M, maybe in the phone band?
> Please don't doubt that I will be very careful to ID legally and make

> sure to listen first, etc. But I just wanted to check...
>
>
> Thank you for your time,
> Ross Tucker, NS7F

I actually used a microswitch from the junkbox for a handkey for several months when I was just getting back on the air after a move.

What you describe sounds like an ergonomic nightmare though. Try 144.200 or 432.100 MHz the multimode calling frequencies. As long as you have a working RX you should be OK. You could drop it down to 100mw and probably still make contacts. There would be serious difficulty coupling 80m energy without an antenna unless you were considering a 135' trailing wire.

I always wanted to build a Get Smart shoe phone or better yet the Star Trek communicator. There was a 73 magazine with one. Lots of fabrication just like the original. It was THE prototype for the now common flip phones.

I never could find the little rotary dial for the shoe phone. I am extremely overjoyed to see the Get Smart reruns back on the local independent station.

My first "HT" was a 1 watt packset radio (Mot H23BAC) with about 5 submini tubes. The RX strip would run about a week on a 6v lantern battery, but there was only about 30 minutes talk time for about $20 worth of batteries for the transmitter. The answer was to build up a solid state FM TX to sub in for the tube strip to run on several surplus SubC Nicads. I lugged that around for several years. I finally got a HT220 Slimline that replaced it. Those were the days when repeaters were a new thing and everybody in town was on the one frequency.

I don't know if you noticed the OP-ED piece in QST from the newbie... Shouldn't we all be building a portable transporter units or time machines instead? We are all obsolete he says. I wonder how long before he has a meltdown and QSY's to his Blackberry.

Jim, ac6tk
http://infotech.awardspace.com/

## 1077. Identify transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 00:08:58 UTC
From: jimmie68@gmail.com
Message-ID: <6a508fc3-722b-4952-b70e-3bb3196a3233@k30g2000hse.googlegroups.com>
Source record: 4664

I have a few transistors(I think) I am trying to identify.
They look like stud mounted SCRs with a 1/4-28 stud but the ohmmeter
says they are NPN transistors. They were in a bag marked "servo amp
transistors" no ledgable markings on the transistors. Any suggestions
as to which type they maybe.

Jimmie

# 1078. Re: Identify transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 01:33:41 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <Vzrnk.526$ZV1.188@trnddc07>
Source record: 4665

<jimmie68@gmail.com> wrote in message
news:6a508fc3-722b-4952-b70e-3bb3196a3233@k30g2000hse.googlegroups.com...
>I have a few transistors(I think) I am trying to identify.
> They look like stud mounted SCRs with a 1/4-28 stud but the ohmmeter
> says they are NPN transistors. They were in a bag marked "servo amp
> transistors" no ledgable markings on the transistors. Any suggestions
> as to which type they maybe.
>
>
> Jimmie

M cubed makes a nifty tester that automatically identifies the leads, type
(NPN etc) DC beta , leakage etc.

Dale W4OP

## 1079. Re: GU-81M linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 10:58:02 UTC
From: MAc <mac_dx@tosiewytnie.poczta.onet.pl>
Message-ID: <g7mhjq$pqa$1@news.onet.pl>
Source record: 4666

May be google translator will help you.
This PA can work also with one tube.

http://www.cqham.ru/HiFi_Contester_EX8A.htm

This is "hard to kill" tube ;-) - very good to use in club station
(idiot proof).

search other articles by EX8A.

MAc
sp9mrn

# 1080. Re: GU-81M linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 11:39:57 UTC
From: steve H <usgzhfckxcguhsevjerxsicfcnvzcztymnvbvinscmfwghvzvczdcbxvssdfvcygfcbhtcfghbytrdfcgvhuytfrgvhytfrgvhytfghytrfghygtyfgvhygtfg@tfif.co.uk>
Message-ID: <489ed3be_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 4667

MAc wrote:
> May be google translator will help you.
> This PA can work also with one tube.
>
> http://www.cqham.ru/HiFi_Contester_EX8A.htm
>
> This is "hard to kill" tube ;-) - very good to use in club station
> (idiot proof).
>
>
> search other articles by EX8A.
>
> MAc
> sp9mrn

Many thanks, that gives me enough info to get me started. I plan on using it for RTTY contests, I have an amp using the 4cx800 but the blower gets to me after a few hours. With the price of 3-500Z in my main amp getting silly this looks like the ideal cheap tube to use with the PSU from the 4cx800 (2800V), just bought two of them on ebay for $60 the pair + one socket. I probably wont need the spare as he's had 12 years of contesting out of a pair.

Steve H

## 1081. New site

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 11:51:48 UTC
From: ha0rex@gmail.com
Message-ID: <2329a710-5bf6-4ee4-b6db-5173224e1b7d@8g2000hse.googlegroups.com>
Source record: 4668

Hello Everybody,

My new radioamateur site is running in BETA state, the url is:

http://ha0rex.freehostia.com/

Now working: DX Cluster (now in Live!), Online Log, Users profile, the
Forum is coming in some days.

Most of the functions are accesable after registration, what is simple
and easy.

73, de HA0REX

## 1082. Re: Identify transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 12:39:35 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <bkBnk.17162$1N1.9406@newsfe07.iad>
Source record: 4669

"Dale Parfitt" <parinc1@verizon.net> wrote in message
news:Vzrnk.526$ZV1.188@trnddc07...

> M cubed makes a nifty tester that automatically identifies the leads, type
> (NPN etc) DC beta , leakage etc.

This is a way cool device and no homebrewer should be without it.

..

# 1083. Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 14:40:10 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <d5de7f2a-d665-4e9c-a235-f0726e779d44@m44g2000hsc.googlegroups.com>
Source record: 4670

All I ever see for Pi coils is cylindrically wound single layer. I remember when I built my first 6146A output cw transmitter back 40 yrs ago, I used a B&W pre made coil for the Pi.

Depending on the Q and plate resistance you see coils for multi band use up to 33 uh, in transmitters.

The only place I see pancake coils used is in Tesla coils, one of which I built with a pre made 18" tall secondary coil. I wound my own primary pancake coil.

Done right a pancake coil takes up alot less room than a cylindrically wound coil.

A six inch diameter pancake coil can have the same inductance as a three inch diameter by six inch long coil with the same size wire.

Anybody know why I shouldn't use a pancake coil in my final? I just bought a 4-1000A. from ebay.

73
n8zu

# 1084. Need a crystal: 1685kc =/- 7kc

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 16:03:30 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <AjEnk.17646$QX3.15203@newsfe02.iad>
Source record: 4671

Anyone have a crystal near 1685kc or so in their
junkbox? Needed for a HBR receiver project.

pete

## 1085. Re: Need a crystal: 1685kc =/- 7kc

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 16:08:30 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <goEnk.17648$QX3.831@newsfe02.iad>
Source record: 4672

That should have been plus or minus several kc if
not exactly 1685kc.

Pete

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:AjEnk.17646$QX3.15203@newsfe02.iad...
> Anyone have a crystal near 1685kc or so in their
> junkbox? Needed for a HBR receiver project.
>
> pete
>
>

# 1086. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 19:24:25 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <eeHnk.7950$IB6.97@bignews8.bellsouth.net>
Source record: 4673

raypsi wrote:
> All I ever see for Pi coils is cylindrically wound single layer. I
> remember when I built my first 6146A output cw transmitter back 40 yrs
> ago, I used a B&W pre made coil for the Pi.
>
> Depending on the Q and plate resistance you see coils for multi band
> use up to 33 uh, in transmitters.
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> The only place I see pancake coils used is in Tesla coils, one of
> which I built with a pre made 18" tall secondary coil. I wound my own
> primary pancake coil.
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> Done right a pancake coil takes up alot less room than a cylindrically
> wound coil.
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> A six inch diameter pancake coil can have the same inductance as a
> three inch diameter by six inch long coil with the same size wire.
>
> Anybody know why I shouldn't use a pancake coil in my final? I just
> bought a 4-1000A. from ebay.
>
> 73
> n8zu
Pancake coils are usually wound with several sections, not one large
section. The problem with these chokes is that they may exhibit
resonance within a ham band, this would be bad as the coil would
'explode' as it absorbed the power. When we had only 5 bands,
80,40,20,15 and 10 meters it was easy to design such a choke keeping any
self resonance out of the ham bands. Now that we've added 60,30,17 and
12 meters the odd's that those old chokes don't self resonate in a ham
band is not the good anymore. A single layer choke will have only one
self resonate point, and it can be made to be above 30mhz (if it falls
at 40mhz the choke would also work on 6 meters). A pancake coil may
have several self resonance points.

# 1087. Re: Identify transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 20:10:50 UTC
From: jimmie68@gmail.com
Message-ID: <93d0bb8d-8337-4968-abb5-60067043f2c0@e53g2000hsa.googlegroups.com>
Source record: 4674

On Aug 10, 8:39 am, "xpyttl" <xpyttl_NOS...@earthling.net> wrote:
> "Dale Parfitt" <pari...@verizon.net> wrote in message
>
> news:Vzrnk.526$ZV1.188@trnddc07...
>
> > > M cubed makes a nifty tester that automatically identifies the leads, type
> > > (NPN etc) DC beta , leakage etc.
>
> This is a way cool device and no homebrewer should be without it.
>
> ..

Sorry, they are NPN transistors. I was trying to find out what type
they may be to determin there suitability in a project. I have had
them since the early 70s. I also found another bag of them and they
are PNP. Beta measures at about 30.
Case style looks like a TO48.

# 1088. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 21:41:16 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <0gJnk.557$EL2.245@trnddc01>
Source record: 4675

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:eeHnk.7950$IB6.97@bignews8.bellsouth.net...
> raypsi wrote:
>> All I ever see for Pi coils is cylindrically wound single layer. I
>> remember when I built my first 6146A output cw transmitter back 40 yrs
>> ago, I used a B&W pre made coil for the Pi.
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>> Depending on the Q and plate resistance you see coils for multi band
>> use up to 33 uh, in transmitters.
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>> The only place I see pancake coils used is in Tesla coils, one of
>> which I built with a pre made 18" tall secondary coil. I wound my own
>> primary pancake coil.
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>> Done right a pancake coil takes up alot less room than a cylindrically
>> wound coil.
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>> A six inch diameter pancake coil can have the same inductance as a
>> three inch diameter by six inch long coil with the same size wire.
>>
>> Anybody know why I shouldn't use a pancake coil in my final? I just
>> bought a 4-1000A. from ebay.
>>
>> 73
>> n8zu
> Pancake coils are usually wound with several sections, not one large
> section. The problem with these chokes is that they may exhibit resonance
> within a ham band, this would be bad as the coil would 'explode' as it
> absorbed the power. When we had only 5 bands, 80,40,20,15 and 10 meters
> it was easy to design such a choke keeping any self resonance out of the
> ham bands. Now that we've added 60,30,17 and 12 meters the odd's that
> those old chokes don't self resonate in a ham band is not the good
> anymore. A single layer choke will have only one self resonate point, and
> it can be made to be above 30mhz (if it falls at 40mhz the choke would
> also work on 6 meters). A pancake coil may have several self resonance
> points.

Are we talking about the same thing here?
My take was that the poster was asking about the output pi network coil not
a plate choke- but I could be wrong. I took the question to be suitability
of a 2 dimensional spiral vs. a classic solenoid coil.
And for clarification, when you say pancake- are you talking about a 2
dimensional spiral?

Dale W4OP

# 1089. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 22:38:15 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <Y1Knk.8307$Ep1.8176@bignews2.bellsouth.net>
Source record: 4676

Dale Parfitt wrote:
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:eeHnk.7950$IB6.97@bignews8.bellsouth.net...
>> raypsi wrote:
>>> All I ever see for Pi coils is cylindrically wound single layer. I
>>> remember when I built my first 6146A output cw transmitter back 40 yrs
>>> ago, I used a B&W pre made coil for the Pi.
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>>> Depending on the Q and plate resistance you see coils for multi band
>>> use up to 33 uh, in transmitters.
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>>> The only place I see pancake coils used is in Tesla coils, one of
>>> which I built with a pre made 18" tall secondary coil. I wound my own
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>>> Done right a pancake coil takes up alot less room than a cylindrically
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>>> bought a 4-1000A. from ebay.
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>>> 73
>>> n8zu
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>> section. The problem with these chokes is that they may exhibit resonance
>> within a ham band, this would be bad as the coil would 'explode' as it
>> absorbed the power. When we had only 5 bands, 80,40,20,15 and 10 meters
>> it was easy to design such a choke keeping any self resonance out of the
>> ham bands. Now that we've added 60,30,17 and 12 meters the odd's that
>> those old chokes don't self resonate in a ham band is not the good
>> anymore. A single layer choke will have only one self resonate point, and
>> it can be made to be above 30mhz (if it falls at 40mhz the choke would
>> also work on 6 meters). A pancake coil may have several self resonance
>> points.
>
> Are we talking about the same thing here?
> My take was that the poster was asking about the output pi network coil not
> a plate choke- but I could be wrong. I took the question to be suitability
> of a 2 dimensional spiral vs. a classic solenoid coil.
> And for clarification, when you say pancake- are you talking about a 2
> dimensional spiral?

>
> Dale W4OP
>
>
Did he mean a toroid coil then? They have been used in tank circuits.

# 1090. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 23:39:30 UTC
From: jimmie68@gmail.com
Message-ID: <6cf3d127-2c8c-49f1-bbaf-efe542710774@c58g2000hsc.googlegroups.com>
Source record: 4677

On Aug 10, 6:38 pm, ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
> Dale Parfitt wrote:
> > "ken scharf" <wa2mzeNOSPAMB...@bellsouth.net> wrote in message
> >news:eeHnk.7950$IB6.97@bignews8.bellsouth.net...
> >> raypsi wrote:
> >>> All I ever see for Pi coils is cylindrically wound single layer. I
> >>> remember when I built my first 6146A output cw transmitter back 40 yrs
> >>> ago, I used a B&W pre made coil for the Pi.
>
> >>> Depending on the Q and plate resistance you see coils for multi band
> >>> use up to 33 uh, in transmitters.
>
> >>> The only place I see pancake coils used is in Tesla coils, one of
> >>> which I built with a pre made 18" tall secondary coil. I wound my own
> >>> primary pancake coil.
>
> >>> Done right a pancake coil takes up alot less room than a cylindrically
> >>> wound coil.
>
> >>> A six inch diameter pancake coil can have the same inductance as a
> >>> three inch diameter by six inch long coil with the same size wire.
>
> >>> Anybody know why I shouldn't use a pancake coil in my final? I just
> >>> bought a 4-1000A. from ebay.
>
> >>> 73
> >>> n8zu
> >> Pancake coils are usually wound with several sections, not one large
> >> section.  The problem with these chokes is that they may exhibit resonance
> >> within a ham band, this would be bad as the coil would 'explode' as it
> >> absorbed the power.  When we had only 5 bands, 80,40,20,15 and 10 meters
> >> it was easy to design such a choke keeping any self resonance out of the
> >> ham bands.  Now that we've added 60,30,17 and 12 meters the odd's that
> >> those old chokes don't self resonate in a ham band is not the good
> >> anymore.  A single layer choke will have only one self resonate point, and
> >> it can be made to be above 30mhz (if it falls at 40mhz the choke would
> >> also work on 6 meters).  A pancake coil may have several self resonance
> >> points.
>
> > Are we talking about the same thing here?
> > My take was that the poster was asking about the output pi network coil not
> > a plate choke- but I could be wrong. I took the question to be suitability
> > of a 2 dimensional spiral vs. a classic solenoid coil.
> > And for clarification, when you say pancake- are you talking about a 2

> > dimensional spiral?
>
> > Dale W4OP
>
> Did he mean a toroid coil then?  They have been used in tank circuits.- Hide quoted text
-
>
> - Show quoted text -

Dale got it, Pretty clear to me he is talking about a coil 1 turn long
by X turns deep similar to an inductor etched on a PC board. Seems Ive
seen a 6m coil like this. 2 or 3 turn of copper capilary tubing.

Jimmie

# 1091. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-10 23:39:49 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <a343c6e8-0f69-4a40-abf8-2fb85ec3b574@k7g2000hsd.googlegroups.com>
Source record: 4678

On Aug 10, 10:40 am, raypsi <RBorow...@gmail.com> wrote:
> All I ever see for Pi coils is cylindrically wound single layer. I
> remember when I built my first 6146A output cw transmitter back 40 yrs
> ago, I used a B&W pre made coil for the Pi.
>
> Depending on the Q and plate resistance you see coils for multi band
> use up to 33 uh, in transmitters.
>
> The only place I see pancake coils used is in Tesla coils, one of
> which I built with a pre made 18" tall secondary coil. I wound my own
> primary pancake coil.
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> Done right a pancake coil takes up alot less room than a cylindrically
> wound coil.
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> A six inch diameter pancake coil can have the same inductance as a
> three inch diameter by six inch long coil with the same size wire.
>
> Anybody know why I shouldn't use a pancake coil in my final? I just
> bought a 4-1000A. from ebay.
>
> 73
> n8zu

Well we all know what an roller inductor is?
Here is a pix of one: http://www.palstar.com/ri20.php

So here is a link to a java program to calculate a
flat spiral pancake coil:
http://www.classictesla.com/java/calculat.html

I might have confused people with pi wound coils I'ma
not talking about pi wound coils such as the 3 pi
coil found here:
http://www.oselectronics.com/ose_p91.htm

I want to use a flat spiral wound coil to replace a roller inductor.
Like the one in the above mentioned roller inductor link.
Any pro's and con's on this topic?

# 1092. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 00:29:37 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <089f6705-8cf6-4fee-bb70-4b9c81f11d7e@f63g2000hsf.googlegroups.com>
Source record: 4679

To calculate the coil I want to replace this is the link:

http://www.qsl.net/in3otd/indcalc.html

here is a link to a image of a flat spiral coil: aka pancake coil

http://pulsedpower.de/inductances/img_spiral.gif

73
n8zu

## 1093. Impedance Heaters

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 00:42:39 UTC
From: AndyTao <22265737@qq.com>
Message-ID: <97ff526f-fd7a-41cd-8234-e2b3096baf9b@v39g2000pro.googlegroups.com>
Source record: 4680

High pressure, high temperature industrial process heaters
http://www.ogogo123sina.cn/

# 1094. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 02:43:51 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <8ec92133-4258-4d1d-92be-54bfd999239e@y21g2000hsf.googlegroups.com>
Source record: 4681

I guess what I really wanted to do is make a PA
for all bands with a plug in PCB. That would have
the right size coils etched into it for each band.
So when I change bands I would just unplug one
band PCB and plug in another PCB for the band
I want. Rather than a band switch that would arc
out. Or a roller inductor that I would have to turn
to the right number of turns to get to the band I
want. Alot cheaper to plug in PCB's than the
price of a band switch with lots of wires
or roller inductor.
This would eliminate trouble switching to 10
meters with a band switch I suspect.

I'd use an edge card connector to plug the coils/PCB
into and out of an edge connector.

# 1095. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 02:57:34 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0808102249110.17698@darkstar.example.org>
Source record: 4682

On Sun, 10 Aug 2008, raypsi wrote:

> I guess what I really wanted to do is make a PA
> for all bands with a plug in PCB. That would have
> the right size coils etched into it for each band.
> So when I change bands I would just unplug one
> band PCB and plug in another PCB for the band
> I want. Rather than a band switch that would arc
> out. Or a roller inductor that I would have to turn
> to the right number of turns to get to the band I
> want. Alot cheaper to plug in PCB's than the
> price of a band switch with lots of wires
> or roller inductor.
> This would eliminate trouble switching to 10
> meters with a band switch I suspect.
>
> I'd use an edge card connector to plug the coils/PCB
> into and out of an edge connector.
>
Well you wouldn't be changing bands with the transmitter
going. So in that regard, plug-in coils, bandswitch or
jumpers are about the same.

People like switches so they don't have to turn off their
transmitter (to ensure not dangerous voltages) reach into their
transmitter and plug in coils. If you have to reach in,
at least some of the other possibilities are viable.

Your edge connector may introduce problems of bad contacts.
If you have to run current through them, bad contacts will
not be a good thing.

And I'd add that a large inductor may not be feasible etched
on a circuit board. The only times I've seen coils etched
into circuit board have been when the coils are low inductance,
the sort of values you'd see at VHF and UHF. Making a coil
large enough may result in way too big a plugin board.

You haven't really specified, I don't think, whether this
is a tube or transistor transmitter. In the days of tubes,
the transmitters were narrow band. With transistors, they've
generally been broad band. So with transistor transmitters,
the bandwitching has been about switching in bandpass or low
pass filters for each band, and since the broadband transmitter
has 50ohm output impedance, the switching is relatively easy.

Michael VE2BVW

# 1096. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 04:12:45 UTC
From: dplatt@radagast.org
Message-ID: <tqq4n5-npl.ln1@radagast.org>
Source record: 4684

> I guess what I really wanted to do is make a PA
> for all bands with a plug in PCB. That would have
> the right size coils etched into it for each band.
> So when I change bands I would just unplug one
> band PCB and plug in another PCB for the band
> I want. Rather than a band switch that would arc
> out. Or a roller inductor that I would have to turn
> to the right number of turns to get to the band I
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> price of a band switch with lots of wires
> or roller inductor.
> This would eliminate trouble switching to 10
> meters with a band switch I suspect.
>
> I'd use an edge card connector to plug the coils/PCB
> into and out of an edge connector.

That sounds rather like the Norcal Sierra design. The pluggable band modules on the Sierra use toroidal coils for the band-specific lowpass and bandpass filters. The PA itself appears to be a broadband design.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

# 1097. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 04:21:54 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <2a17f24e-dfd6-4196-89a6-c2b90d4596e8@w7g2000hsa.googlegroups.com>
Source record: 4683

On Aug 10, 10:57 pm, Michael Black <et...@ncf.ca> wrote:
> On Sun, 10 Aug 2008, raypsi wrote:
> > I guess what I really wanted to do is make a PA
> > for all bands with a plug in PCB. That would have
> > the right size coils etched into it for each band.
> > So when I change bands I would just unplug one
> > band PCB and plug in another PCB for the band
> > I want. Rather than a band switch that would arc
> > out. Or a roller inductor that I would have to turn
> > to the right number of turns to get to the band I
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> > into and out of an edge connector.
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> Well you wouldn't be changing bands with the transmitter
> going. So in that regard, plug-in coils, bandswitch or
> jumpers are about the same.
>
> People like switches so they don't have to turn off their
> transmitter (to ensure not dangerous voltages) reach into their
> transmitter and plug in coils. If you have to reach in,
> at least some of the other possibilities are viable.
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> Your edge connector may introduce problems of bad contacts.
> If you have to run current through them, bad contacts will
> not be a good thing.
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> And I'd add that a large inductor may not be feasible etched
> on a circuit board. The only times I've seen coils etched
> into circuit board have been when the coils are low inductance,
> the sort of values you'd see at VHF and UHF. Making a coil
> large enough may result in way too big a plugin board.
>
> You haven't really specified, I don't think, whether this
> is a tube or transistor transmitter. In the days of tubes,
> the transmitters were narrow band. With transistors, they've
> generally been broad band. So with transistor transmitters,
> the bandwitching has been about switching in bandpass or low
> pass filters for each band, and since the broadband transmitter

> has 50ohm output impedance, the switching is relatively easy.
>
> Michael VE2BVW

Yes it's a tube PA I bought a 4-1000A from ebay
there isn't much current at 6000 volts at least not for
Ham Radio power. there's a variety of ways to power down the
PA as soon as I start to pull the PCB out before it becomes
disconnected. And to soft start it up as I'm plugging another
PCB coil in.

The inductance is more dependent on the diameter of the coil
and the number turns on the coil. So a 6 inch square PCB
with a 6 inch diameter 10 turn coil etched on it would
work 160 meter band. Or at least it has enough inductance
to operate on the 160 meter band.

I've seen too many of a senior moment when they hot switch
a band switch or when parasitics build up from a shorted
parasitic resistor and the VHF RF goes to that band switch
looking for a path to ground blowing it to kingdom come.

73
n8zu

# 1098. Choice of DC blocking Capacitors in Microstrip Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 15:47:07 UTC
From: Alec <yttoh.etis@googlemail.com>
Message-ID: <28a6430c-9be4-4b6b-b017-ed211b752b7e@x35g2000hsb.googlegroups.com>
Source record: 4685

Hi,

I was wondering as to how to choose the correct value of a DC blocking capacitor with least possible reactance with atleast 5V and 20mA. Center Frequency 910MHz. The value of capacitor that i need is above 200pF..

I know the thumb rule that SRF(self resonant frequency) > 2 Operating frequency. but i enquired both Farnell and Rscomponents distributors in UK as am here .., Only low value capacitors satify the above criteria of SRF. How do i proceed with the same...

Thanks a lot
Alec

# 1099. Re: Choice of DC blocking Capacitors in Microstrip Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-11 19:03:13 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <R10ok.239031$TT4.134189@attbi_s22>
Source record: 4686

> I was wondering as to how to choose the correct value of a DC blocking
> capacitor with least possible reactance with atleast 5V and 20mA.
> Center Frequency 910MHz. The value of capacitor that i need is above
> 200pF..
>
> I know the thumb rule that SRF(self resonant frequency) > 2 Operating
> frequency. but i enquired both Farnell and Rscomponents distributors
> in UK as am here .., Only low value capacitors satify the above
> criteria of SRF. How do i proceed with the same...
>
> Thanks a lot
> Alec

Well, you might try paralleling a bunch of little ones.

W4ZCB

# 1100. Re: Choice of DC blocking Capacitors in Microstrip Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-12 01:27:11 UTC
From: Bob Doyle <spamthisrealgood@gmail.com>
Message-ID: <JF5ok.9488$i15.4525@newsfe01.iad>
Source record: 4687

Alec wrote:
> Hi,
>
> I was wondering as to how to choose the correct value of a DC blocking
> capacitor with least possible reactance with atleast 5V and 20mA.
> Center Frequency 910MHz. The value of capacitor that i need is above
> 200pF..
>
> I know the thumb rule that SRF(self resonant frequency) > 2 Operating
> frequency. but i enquired both Farnell and Rscomponents distributors
> in UK as am here .., Only low value capacitors satify the above
> criteria of SRF. How do i proceed with the same...
>
> Thanks a lot
> Alec

I'm confused. Why do you care what the capacitance is? If you choose a capacitor that is series resonant at 910 MHz (i.e., the reactance is zero), isn't that is the best bypass capacitor or coupling capacitor that you can get.

If you are doing high volume work, you may want to standardize on a high quality (porcelain, etc) capacitor from single manufacturer so that the SRF is tightly controlled.

If you need the 200pf for DC (or low frequency) reasons, consider two different capacitors - one for low frequencies and one for high frequencies. You'll need to isolate them so they don't interact unexpectedly.

I doubt whether you'll find a 200pf cap with that SRF.

Bob.

# 1101. FREE: 70 Page RF Products Catalog

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-15 19:39:50 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <ad589f16-d23e-4888-9608-568484578d24@c65g2000hsa.googlegroups.com>
Source record: 4688

AAA RF Products Latest Catalog is now available.

Please Provide your mailing address to receive your copy at no charge.

Hope you guys all have a great day and I will look forward to helping
you on all your RF needs

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1102. 4-1000A VALVE/TUBE

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-16 00:47:44 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <f6dad03b-6a63-4603-bdbe-9869f26f788b@k37g2000hsf.googlegroups.com>
Source record: 4689

I just got my 4-1k tube. It turned out to be a Sylvania brand.
I know Sylvania sold transmitting tubes.
But did Sylvania make them or buy them from another vender?

This one I got from ebay:
has a code date of 8806.

The history on it: was pulled from an AM
broadcast station in 1993, from the AM modulator.

And does anybody know the cold resistance or the filament?
I haven't seen any inrush current limiting circuits for the 4-1k.

73

n8zu

## 1103. Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-16 05:04:06 UTC
From: pdlemper@earthlink.net
Message-ID: <nrkca49jtg6kp1rtqqahijcatd2mi23vvh@4ax.com>
Source record: 4690

Now retired I'm trying to become active again.
My TS-520S has not been on for 30 years.
I don't have a variactor ( variable transformer ).
At the TARC advice was to put a lightbulb in series
to take the surge. Should I use a high resistance
( low wattage ) bulb or vice versa ?
Would this be as good as a simple L-C network ?
Somebody said just plug it in. Are there any other
ideas ?
Thanks for your kind assistance.
Dave WB3DWE Temple, TX pdlemper@earthlink.net

# 1104. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-16 06:03:28 UTC
From: dplatt@radagast.org
Message-ID: <g67in5-gsc.ln1@radagast.org>
Source record: 4691

>Now retired I'm trying to become active again.
>My TS-520S has not been on for 30 years.
>I don't have a variactor ( variable transformer ).

I'd strongly encourage you to ask around, find somebody who has one, and do the power-up with the variable-voltage transformer. Take your time - ease the voltage up from zerch to nominal over a period of a few minutes.

>At the TARC advice was to put a lightbulb in series
>to take the surge. Should I use a high resistance
>( low wattage ) bulb or vice versa ?

If you do this, do the former... low-wattage. You want to power up the rig *slowly*, so that the dielectrics in the electrolytic capacitors have a chance to re-form gently. The lower the wattage of the bulb (the higher the resistance) the longer it'll take to charge the power supply fully and the lower the final voltage will be.

You could do it in stages. Wire up a standard light-bulb socket in series with a power cord for the rig. Start out with a 5-watt bulb, power up, let the rig sit for a few minutes, power down again, switch to a 25-watt bulb, repeat the process again... then go to a 100-watt bulb, then a 200-watt bulb.

This approach isn't as effective, or as controllable, as using a Variac or similar variable-voltage transformer. The bulb's resistance will be low when it's cold, and will rise when it heats up... so it won't limit the initial inrush current all that effectively.

>Would this be as good as a simple L-C network ?
>Somebody said just plug it in.

It might easily go BOOM if you do. If it's been sitting around un-powered for 30 years, the dielectic oxide layer in the power supply caps may have thinned and developed pinholes... hitting it with full mains voltage and no current limiting could result in a sudden short circuit inside the caps. They're quite spectacular when they blow... messy, though.

> Are there any other
>ideas ?

Negative-temperature-coefficient resistor instead of a light bulb? These are used as inrush suppressors in switching power supplies... their initial resistance is high when they're cold, and drops when they warm up.

Borrowing the use of a Variac for half an hour is still a better way
to do it, I think.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

# 1105. Re: 4-1000A VALVE/TUBE

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 02:52:49 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <c01e3b92-c153-4140-be4f-8d30fd51b998@w7g2000hsa.googlegroups.com>
Source record: 4692

> 
> And does anybody know the cold resistance or the filament?
> I haven't seen any inrush current limiting circuits for the 4-1k.
> 
> 73
> 
> n8zu

I just put my home made amper on the filament. Actually a 2.80 amp
amper.
I couldn't find my 7805 I use for a constant current source. So I had
the 5 ohm resistor in series with my 14 volt regulated supply. My 5
ohm resistor is 40 ft of cat3 3 pair telephone wire for a total of 240
ft of 24 AWG wire. I put that in series with the 4-1k filament and
across 14.0 volt regulated supply it draws 2.80 amps.
The voltage drop on the filament was 0.100 volts and a filament
resistance at 0.100 volts is 0.0357 ohms. Funny because at 7.5VAC
it's exactly 10 times that resistance.
I can't afford peter dahl transformers. I has to use MOT's for the
filament screen and plate supplies. I have to use 2 MOT's to get the
power I need. This works out to my advantage because with 2 filaments
in series it gives me 7.5VAC CT, but at a current that is only limited
by the 14AWG wire they use for the winding. Two MOT's 14AWG wire would
limit the inrush current to about 150 amps of instantaneous current at
the peak voltage.

73

n8zu

## 1106. DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 03:13:29 UTC
From: Jae <jevans2819@bellsouth.net>
Message-ID: <4305863c-c39c-4ac4-a9f8-850358669aeb@f36g2000hsa.googlegroups.com>
Source record: 4693

Does anyone have CCS compiler code for a PIC16F877A running a AD9954 sweeping around 175Mhz.

JAE

# 1107. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 07:35:51 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <958d098b-e530-4a91-bc9d-a89209825073@u6g2000prc.googlegroups.com>
Source record: 4694

On Aug 16, 4:03 pm, dpl...@radagast.org (Dave Platt) wrote:
> >Now retired I'm trying to become active again.
> >My TS-520S has not been on for 30 years.
> >I don't have a variactor ( variable transformer ).
>

KISS. Wire a 60w light globe in series, turn it on, let it sit for a few hours. Filaments OFF for this test.

Havent used a variac for this for years - reason - its the switch on current surge thats going to kill old electros, and the variac has no current limiting whereas the light bulb does. You will see a brief "Flash" as the caps charge up, then maybe a dull glow, eventually, no light at all.

Given that the caps used were / are modern, and of good quality to start with, the KISS method works well.

Oh, BTW - when all this is done, apply full mains power, let the tube filaments soak for a few hours lest they have gone gassy.

Andrew VK3BFA.

# 1108. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 12:29:58 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <4c6e9b98-5d9e-4234-a4ae-efa3723df209@w7g2000hsa.googlegroups.com>
Source record: 4695

I tell you what Dave:

Save the grief and replace the caps.
What your'e doing is betting that
you can reform the electrolyte that
may be left in the capacitors after
30+ years.

I hope you win that bet.

73 OM

n8zu

# 1109. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 13:21:24 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <seKdnVBGzaB9uDXVnZ2dnUVZ8tbinZ2d@pipex.net>
Source record: 4696

Andrew VK3BFA wrote:
> On Aug 16, 4:03 pm, dpl...@radagast.org (Dave Platt) wrote:
>>> Now retired I'm trying to become active again.
>>> My TS-520S has not been on for 30 years.
>>> I don't have a variactor ( variable transformer ).
>
> KISS. Wire a 60w light globe in series, turn it on, let it sit for a
> few hours. Filaments OFF for this test.
>
> Havent used a variac for this for years - reason - its the switch on
> current surge thats going to kill old electros, and the variac has no
> current limiting whereas the light bulb does. You will see a brief
> "Flash" as the caps charge up, then maybe a dull glow, eventually, no
> light at all.
==========
Don't understand the above.
When using a variac starting at zero and gradually increasing the
voltage there can't be any appreciable inrush current.

I happen to have a 8 Amperes variac and would always use it to 'fire-up'
a previously retired oldtimer (boat anchor)

I have a rather large junk box with high capacitance value elcos and
recently exposed them all to a 'zero to max working voltage' from an
adjustable HV PSU. I do that once every 3 years.

Frank GM0CSZ / KN6WH

# 1110. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 13:36:02 UTC
From: Edwin Johnson <edwinljohnson@bellsouth.net>
Message-ID: <6PVpk.11343$XB4.7032@bignews9.bellsouth.net>
Source record: 4697

On 2008-08-16, pdlemper@earthlink.net <pdlemper@earthlink.net> wrote:
> Now retired I'm trying to become active again.
> My TS-520S has not been on for 30 years.
> I don't have a variactor ( variable transformer ).
~
> Dave WB3DWE Temple, TX pdlemper@earthlink.net

I went through this a few years ago with a Drake TR-4. Not having a variactor available, someone suggested a light dimmer used for incadescent lights. Since I was not planning to transmit nor draw much current, just that used with receive, it worked very fine and isn't expensive. I simply used a meter to measure the voltage. I ran several days at about 50vac and then up to 75vac for a couple of days, and then up to full voltage.

...Edwin, KD5ZLB

--

_____
"Once you have flown, you will walk the earth with your eyes
turned skyward, for there you have been, there you long to
return."-da Vinci http://bellsouthpwp2.net/e/d/edwinljohnson

# 1111. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 22:42:05 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <826af4ef-e163-4055-8eab-f1dd572ac6d5@w39g2000prb.googlegroups.com>
Source record: 4698

On Aug 18, 1:38 am, ehr...@dk3uz.ampr.org (Edmund H. Ramm) wrote:
> In <958d098b-e530-4a91-bc9d-a89209825...@u6g2000prc.googlegroups.com> Andrew VK3BFA
<vk3...@hotmail.com> writes:
>

> Are physics reversed down under? Up here in the old world a light
> bulb's filament (tungsten) resistance increases with temperature.
>

Er - yes, thats correct.So whats the problem?

Andrew VK3BFA.

# 1112. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-17 22:44:55 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <e7a6c9ad-640b-4c31-aa8a-ead3b3ef3b18@z11g2000prl.googlegroups.com>
Source record: 4699

On Aug 17, 11:21 pm, Highland Ham <abcgm0csz.kn6wh...@dsl.pipex.com>
wrote:
>
> ============================================
> Don't understand the above.
> When using a variac starting at zero and gradually increasing the
> voltage there can't be any appreciable inrush current.
>
> I happen to have a 8 Amperes variac and would always use it to 'fire-up'
> a previously retired oldtimer (boat anchor)
>
> I have a rather large junk box with high capacitance value elcos and
> recently exposed them all to a 'zero to max working voltage' from an
> adjustable HV PSU. I do that once every 3 years.
>
> Frank GM0CSZ / KN6WH

Well, mine took out a few SMPS power supplies, and its a pain in the
arse to set up, connect meters, gingerly spend time slowly
incrementing the voltage - life is too short to stuff around......

Hey, you got time to do Rocket Science, thats fine. Each to his own.

Andrew VK3BFA.

# 1113. Re: Pancake wound Pi coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-18 00:11:55 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <48a8be36@clear.net.nz>
Source record: 4700

raypsi wrote:
> On Aug 10, 10:57 pm, Michael Black <et...@ncf.ca> wrote:
>
>>On Sun, 10 Aug 2008, raypsi wrote:
>>
>>>I guess what I really wanted to do is make a PA
>>>for all bands with a plug in PCB. That would have
>>>the right size coils etched into it for each band.
>>>So when I change bands I would just unplug one
>>>band PCB and plug in another PCB for the band
>>>I want. Rather than a band switch that would arc
>>>out. Or a roller inductor that I would have to turn
>>>to the right number of turns to get to the band I
>>>want. Alot cheaper to plug in PCB's than the
>>>price of a band switch with lots of wires
>>>or roller inductor.
>>>This would eliminate trouble switching to 10
>>>meters with a band switch I suspect.
>>
>>>I'd use an edge card connector to plug the coils/PCB
>>>into and out of an edge connector.
>>
>>Well you wouldn't be changing bands with the transmitter
>>going. So in that regard, plug-in coils, bandswitch or
>>jumpers are about the same.
>>
>>People like switches so they don't have to turn off their
>>transmitter (to ensure not dangerous voltages) reach into their
>>transmitter and plug in coils. If you have to reach in,
>>at least some of the other possibilities are viable.
>>
>>Your edge connector may introduce problems of bad contacts.
>>If you have to run current through them, bad contacts will
>>not be a good thing.
>>
>>And I'd add that a large inductor may not be feasible etched
>>on a circuit board. The only times I've seen coils etched
>>into circuit board have been when the coils are low inductance,
>>the sort of values you'd see at VHF and UHF. Making a coil
>>large enough may result in way too big a plugin board.
>>
>>You haven't really specified, I don't think, whether this
>>is a tube or transistor transmitter. In the days of tubes,
>>the transmitters were narrow band. With transistors, they've

>>generally been broad band. So with transistor transmitters,
>>the bandwitching has been about switching in bandpass or low
>>pass filters for each band, and since the broadband transmitter
>>has 50ohm output impedance, the switching is relatively easy.
>>
>> Michael VE2BVW
>
>
> Yes it's a tube PA I bought a 4-1000A from ebay
> there isn't much current at 6000 volts at least not for
> Ham Radio power. there's a variety of ways to power down the
> PA as soon as I start to pull the PCB out before it becomes
> disconnected. And to soft start it up as I'm plugging another
> PCB coil in.
>
> The inductance is more dependent on the diameter of the coil
> and the number turns on the coil. So a 6 inch square PCB
> with a 6 inch diameter 10 turn coil etched on it would
> work 160 meter band. Or at least it has enough inductance
> to operate on the 160 meter band.
>
> I've seen too many of a senior moment when they hot switch
> a band switch or when parasitics build up from a shorted
> parasitic resistor and the VHF RF goes to that band switch
> looking for a path to ground blowing it to kingdom come.
>
> 73
> n8zu
>
Gosh! I thought I was the only one left making pancake coils.
Of course mine were for my little 30watt rotary spark gap TX.
Its one I use at NZVRS exhibitions to show visitors what spark
stations looked like. The "ring of fire" effect always fascinates them.
In the case of Tesla and spark gear generally the fact that the 2 ends
of the winding were widely separated was very important as the peak
voltages were so high.
It would be intersting to here if you idea pans out.
73 Cliff Wright ZL1BDA ex G3NIA

## 1114. Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-18 01:12:56 UTC
From: mrhaney <w4pqw@cox.net>
Message-ID: <3e143b92-6e3e-4872-b021-03f0cf26237b@26g2000hsk.googlegroups.com>
Source record: 4701

I am looking for a few (10) diodes 1N270...It is a germanium and used in Double Balanced mixers in SSB generation..Most suppliers have a $25 to $50 min order and I don`t care for that.. thanks Harold W4PQW

## 1115. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-18 02:31:13 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <R95qk.302731$yE1.224862@attbi_s21>
Source record: 4702

"mrhaney" <w4pqw@cox.net> wrote in message
news:3e143b92-6e3e-4872-b021-03f0cf26237b@26g2000hsk.googlegroups.com...
>I am looking for a few (10) diodes 1N270...It is a germanium and used
> in Double Balanced mixers in SSB generation..Most suppliers have a $25
> to $50 min order and I don`t care for that.. thanks Harold W4PQW

Hi Harold. I can supply your needs, but for info, I have never. in a lot of years, called on MiniCircuits Labs (MO) for a small order and not have them waive the minimum order charge if needed. VERY nice folks to work with and they make better balanced mixers than you will. They have some black magic in their ferrite department.

W4ZCB

## 1116. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-18 02:50:31 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <1s5qk.27505$1N1.17047@newsfe07.iad>
Source record: 4703

"mrhaney" <w4pqw@cox.net> wrote in message
news:3e143b92-6e3e-4872-b021-03f0cf26237b@26g2000hsk.googlegroups.com...
>I am looking for a few (10) diodes 1N270...It is a germanium and used
> in Double Balanced mixers in SSB generation..Most suppliers have a $25
> to $50 min order and I don`t care for that.. thanks Harold W4PQW

Have you tried Dans Small Parts? Are hot carrier diodes
an acceptable substitute for that application?

73

Pete

# 1117. Lykes standing wave bridge field strength indicator for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-18 13:56:54 UTC
From: dcurtis3727@gmail.com
Message-ID: <b7ffcf79-b485-486a-9028-08423ff14eba@59g2000hsb.googlegroups.com>
Source record: 4704

Lykes standing wave bridge field strength indicator for sale

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&rd=1&item=270266585675&ssPageName=STRK:MESE:IT&ih=017

# 1118. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-18 15:09:15 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <11b4dd69-5666-4a12-b084-ae37f2832b59@25g2000hsx.googlegroups.com>
Source record: 4705

On Aug 17, 9:12 pm, mrhaney <w4...@cox.net> wrote:
> I am looking for a few (10) diodes 1N270...It is a germanium and used
> in Double Balanced mixers in SSB generation..Most suppliers have a $25
> to $50 min order and I don`t care for that.. thanks  Harold W4PQW

Are you trying to reproduce something from a 60's handbook? I remember them speccing 1N270's but that's because those were the parts people had in the junkboxes back then. There is nothing at all magic about germanium here. The silicon diodes will require slightly more drive voltage to switch but that's not a big deal as you always drive them way into saturation anyway.

NTE109 is the ECT/NTE number for a their medium-voltage germanium replacement, officially listed in the NTE sub book, and Mouser and maybe even your local radio/TV repairman would have some. Mouser has no minimum order.

You will have much better luck using 1N914's or 1N4148's or even better a real matched DBM from Minicircuits et al. "Experimental Methods in RF Design" has a lot of good scoop on mixers that goes way beyond anything in a 60's ARRL handbook.

Tim N3QE

# 1119. Re: 70 Page RF Products Catalog

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-19 14:56:14 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <1cBqk.17$RV7.13@newsfe01.iad>
Source record: 4706

WOW the prices are really high. Guess I'll stick with "Mouser.com".
Rich
Fort Worth TX

"Travis" <TravisCurrier@gmail.com> wrote in message
news:ad589f16-d23e-4888-9608-568484578d24@c65g2000hsa.googlegroups.com...
> AAA RF Products Latest Catalog is now available.
>
> Please Provide your mailing address to receive your copy at no charge.
>
> Hope you guys all have a great day and I will look forward to helping
> you on all your RF needs
>
>
> Travis Currier
> AAA RF Products
> Phone: 949-481-3154
> Email:sales@aaarfproducts.com
> Website: www.aaarfproducts.com
> Location: San Clemente, CA

## 1120. FREE: 70 Page RF Products Catalog

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-19 17:03:51 UTC
From: Travis <TravisCurrier@gmail.com>
Message-ID: <94cf2ae8-33cb-4ed5-b7c7-eeed20a11a73@d1g2000hsg.googlegroups.com>
Source record: 4707

AAA RF Products Latest Catalog is now available.

Please Provide your mailing address to receive your copy at no charge.

Hope you guys all have a great day and I will look forward to helping
you on all your RF needs

Travis Currier
AAA RF Products
Phone: 949-481-3154
Email:sales@aaarfproducts.com
Website: www.aaarfproducts.com
Location: San Clemente, CA

# 1121. Re: 70 Page RF Products Catalog

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-19 19:06:37 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <4REqk.28921$1p1.14361@en-nntp-08.dc1.easynews.com>
Source record: 4708

"Travis" <TravisCurrier@gmail.com> wrote in message
news:94cf2ae8-33cb-4ed5-b7c7-eeed20a11a73@d1g2000hsg.googlegroups.com...
> Hope you guys all have a great day and I will look forward to helping
> you on all your RF needs

We've already blacklisted you at our company as a vendor to avoid, given your spamming tactics.

# 1122. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-19 22:13:08 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <9ea1890a-d059-4d95-b987-31e5520c2188@b1g2000hsg.googlegroups.com>
Source record: 4709

On Aug 17, 9:12 pm, mrhaney <w4...@cox.net> wrote:
> I am looking for a few (10) diodes 1N270...It is a germanium and used
> in Double Balanced mixers in SSB generation..Most suppliers have a $25
> to $50 min order and I don`t care for that.. thanks Harold W4PQW

Hey Harold:

Try your luck with this guy:

http://www.angelfire.com/electronic2/index1/index.html

takes paypal has tonnes of them in stock and only charges

$3.95 for shipping and handling for an order like yours

The shipping cost more than the parts but there's no

minimum order.

73 OM

N8ZU

# 1123. Re: 70 Page RF Products Catalog

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-20 00:25:00 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <AsJqk.12643$XT1.11460@bignews5.bellsouth.net>
Source record: 4710

Joel Koltner wrote:
> "Travis" <TravisCurrier@gmail.com> wrote in message
> news:94cf2ae8-33cb-4ed5-b7c7-eeed20a11a73@d1g2000hsg.googlegroups.com...
>> Hope you guys all have a great day and I will look forward to helping
>> you on all your RF needs
>
> We've already blacklisted you at our company as a vendor to avoid, given your
> spamming tactics.
>
>
"aaarfproducts.com" Sounds like a "dog" to me.

# 1124. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-20 09:02:36 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <8c028325-e508-4db6-a2d3-7d7bd39d0727@x16g2000prn.googlegroups.com>
Source record: 4711

On Aug 20, 8:27 am, ehr...@dk3uz.ampr.org (Edmund H. Ramm) wrote:
> In <826af4ef-e163-4055-8eab-f1dd572ac...@w39g2000prb.googlegroups.com> Andrew VK3BFA
<vk3...@hotmail.com> writes:
>
>
> There will only be negligible inrush current limiting. For that you'll
> need an NTC resistor like an Epcos NTC22. All you get from a light bulb
> is a voltage reduction -mains voltage minus the voltage drop across the
> bulb- but only AFTER the inrush current you intended to prevent has already
> flown.
>
> A light bulb in series with an inrush current limiter might be suitable
> for smoke testing equipment after prolonged disuse, though.
>
>
Yes. Whats the DV/DT of the positor versus a light bulb? - I got no
idea.....
The light bulb method works - its quick and dirty, and so far I have
never blown an electrolytic capacitor using this method. Its also VERY
useful in firing up SMPS devices - it does current limit quick enough
if theres a gross fault to prevent damage.

But, each to his own. Of more concern would be corrosion /freezing of
pots/switches etc. And a 30 year old mains power cable? - mm - and
what about checking the insulation resistance of the power
transformer..

But it ain't the Space Shuttle - live dangerously...Just Do It....

Andrew VK3BFA.

# 1125. Crystal Needed, 13 MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-20 13:22:21 UTC
From: CripeCentral@gmail.com
Message-ID: <938ef20e-e803-437c-9bf6-0b09667c533d@d77g2000hsb.googlegroups.com>
Source record: 4712

Hi all. I am looking for a 13.0 MHz crystal in an HC-49 package.
Anyone know of a vendor who might have them?

tnx es 73, Dave NM0S

## 1126. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-21 02:37:28 UTC
From: JB <nospam@goofball.net>
Message-ID: <lx4rk.322$p72.68@trnddc05>
Source record: 4713

The light bulb has advantages. It will light up if there is a short. You can build a rig tester by just putting an outlet in parallel with the light switch, turn it on then plug in and turn on the Rig, then turn off the switch. The light should dim and never get brighter.

# 1127. Re: Crystal Needed, 13 MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-21 03:26:36 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <d89b2dc3-d84b-43df-876b-41e14a43fb05@w39g2000prb.googlegroups.com>
Source record: 4714

On Aug 20, 6:22 am, CripeCent...@gmail.com wrote:
> Hi all. I am looking for a 13.0 MHz crystal in an HC-49 package.
> Anyone know of a vendor who might have them?
>
> tnx es 73, Dave NM0S

Have lots of 13.000MHz in HC-50/U holders; same except 1mm pins
instead of .46mm wire leads. Want one or two?

Cheers,
Tom

# 1128. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-21 15:31:04 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g8k1no$r52$1@f04n12.cac.psu.edu>
Source record: 4715

Edmund H. Ramm wrote:
> In <826af4ef-e163-4055-8eab-f1dd572ac6d5@w39g2000prb.googlegroups.com> Andrew VK3BFA
<vk3bfa@hotmail.com> writes:
>
>> On Aug 18, 1:38 am, ehr...@dk3uz.ampr.org (Edmund H. Ramm) wrote:
>>> In <958d098b-e530-4a91-bc9d-a89209825...@u6g2000prc.googlegroups.com> Andrew VK3BFA
<vk3...@hotmail.com> writes:
>>>
>
>>> Are physics reversed down under? Up here in the old world a light
>>> bulb's filament (tungsten) resistance increases with temperature.
>>>
>
>> Er - yes, thats correct.So whats the problem?
>
> There will only be negligible inrush current limiting. For that you'll
> need an NTC resistor like an Epcos NTC22. All you get from a light bulb
> is a voltage reduction -mains voltage minus the voltage drop across the
> bulb- but only AFTER the inrush current you intended to prevent has already
> flown.

That lightbulb heats up pretty quickly, especially if there is a short
in the radio.

Just as a comparison:

a 250 watt bulb has a cold resistance of around 3 Ohms.

A 60 watt bulb, 18 Ohms

A 40 Watt bulb, 25 Ohms

I don't have a 25 Watt bulb handy, so I'm not sure of it's cold
resistance. But the other bulbs in that neighborhood are at around 14
times the resistance hot vs cold, I'll assume it is around 60 ohms.

Sorry for the math here, but R = V squared/P

That would equal around 58 Ohms hot resistance for the 250 watt bulb

240 Ohms for the 60 watt bulb

360 Ohms for the 40 watt bulb.

830 Ohms for a 25 watt bulb

I usually use a 25 watt bulb, so discounting any inductive effects, I'll
be looking at a maximum start current of 240 watts if the radio is a

dead short, and that for only a very short period of time.

> A light bulb in series with an inrush current limiter might be suitable
> for smoke testing equipment after prolonged disuse, though.

There isn't anything wrong with that approach, but it is probably overkill.

- 73 de Mike N3LI -

# 1129. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-21 19:06:20 UTC
From: "pfjw@aol.com" <pfjw@aol.com>
Message-ID: <8bc30cfa-d781-4575-bcd7-6db89615a8f3@m45g2000hsb.googlegroups.com>
Source record: 4716

On Aug 16, 1:04 am, pdlem...@earthlink.net wrote:
> Now retired I'm trying to become active again.
> My TS-520S has not been on for 30 years.
> I don't have a variactor ( variable transformer ).
> At the TARC advice was to put a lightbulb in series
> to take the surge.  Should I use a high resistance
> ( low wattage ) bulb or vice versa ?
> Would this be as good as a simple  L-C network ?
> Somebody said just plug it in. Are there any other
> ideas ?
> Thanks for your kind assistance.
> Dave WB3DWE  Temple, TX  pdlem...@earthlink.net

A couple of disclaimers first:

a) I know diddly/squat about Ham equipment. I am not a Ham.
b) I have been noodling about with vintage equipment, tube & solid-state for now over 30 years, so I am familiar with the species. What I write below is a generic approach to (re)starting vintage equipment after some years at idle.

So:

As I understand, the Kenwood is a tube-based unit, however it has a solid-state rectifier and is mostly solid-state in general. What this means is that there is some validity to bringing up the voltage slowly using a Variac as the caps will see a gradually increasing voltage - unlike what they would see from a tube rectifier which does not pass current until about 70V or so.

That it is from the transistor era, at least in part, suggests that the filter caps may be of sufficiently recent manufacture as to be likely to be good - the operative word here is *LIKELY*, not *certainly*. Kenwood was also not know to use cheap-junk caps in their equipment.

HOWEVER: A variac is really no better than a dim-bulb tester unless it is equipped with a current meter (amps or watts) that will read the actual current draw of the unit. I have been known to RANT on this subject at length - but I will spare this group and merely state that UNLESS you have the means to measure actual current drawn by the unit and at a sufficiently fine degree as to give you useful data, don't waste your time with a Variac. It gives you a false sense of security.

IF you have the means to measure current - either with your VOM in series or with a poor-man's ammeter (measure voltage drop across a 1-ohm resistor, for example), this technique is very useful. Raise the voltage s-l-o-w-l-y, watching the meter all the time. It will jump up (typically) then slide down as the caps charge. Slowly-slowly-nicely-nicely until you reach operating voltage over 4-5 minutes or so. And KEEP WATCHING!

If the caps start to fail at full B+, you will see that meter creep up. If they go anything beyond about 80% (SWAG guess - more below) of the nameplate rating of the unit, you have real problems.

Now, here is where I cannot comment beyond the generic - I have no idea what the quiescent vs. active current draw is with the Kenwood. THIS IS IMPORTANT. As you will not be transmitting or whatever, you should be operating at/near the quiescent current. This may be a very small percentage of the full nameplate rating - my guess is that this is so. You will need to know what that is. If you are operating even 5% beyond the "proper" quiescent current, that will be expressed as heat somewhere - and eventually *POOF* at some unobtanium or expensive part.

You get the point. The idea is to bring power to the beast slowly so that failed caps or similar may be discovered before any actual damage is done. For this to work you need a means to determine whether the unit is taking excess current - and you need to be able to measure this in fine-enough increments to be worthwhile. Otherwise, you are wasting your time as a small problem or series of small problems will be invisible to crude means.

I keep this unit for these sorts of tests:

http://www.oaktreeent.com/web_photos/test_gear/Heathkit_IP-5220_web.jpg

It is an metered Iso-Variac, overkill for once-in-a-while needs, but I use it constantly.

Peter Wieck
Melrose Park, PA

# 1130. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-21 22:43:36 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <3c8e0614-5559-40cd-a3f8-4b9c19190d58@p31g2000prf.googlegroups.com>
Source record: 4717
Body handling: HTML body converted to readable text

On Aug 22, 5:06 am, "p...@aol.com" wrote:
> On Aug 16, 1:04 am, pdlem...@earthlink.net wrote:
>
> > Now retired I'm trying to become active again.
> > My TS-520S has not been on for 30 years.
> > I don't have a variactor ( variable transformer ).
> > At the TARC advice was to put a lightbulb in series
> > to take the surge. Should I use a high resistance
> > ( low wattage ) bulb or vice versa ?
> > Would this be as good as a simple L-C network ?
> > Somebody said just plug it in. Are there any other
> > ideas ?
> > Thanks for your kind assistance.
> > Dave WB3DWE Temple, TX pdlem...@earthlink.net
>
> A couple of disclaimers first:
>
> a) I know diddly/squat about Ham equipment. I am not a Ham.
> b) I have been noodling about with vintage equipment, tube & solid-
> state for now over 30 years, so I am familiar with the species. What I
> write below is a generic approach to (re)starting vintage equipment
> after some years at idle.
>
> So:
>
> As I understand, the Kenwood is a tube-based unit, however it has a
> solid-state rectifier and is mostly solid-state in general. What this
> means is that there is some validity to bringing up the voltage slowly
> using a Variac as the caps will see a gradually increasing voltage -
> unlike what they would see from a tube rectifier which does not pass
> current until about 70V or so.
>
> That it is from the transistor era, at least in part, suggests that
> the filter caps may be of sufficiently recent manufacture as to be
> likely to be good - the operative word here is *LIKELY*, not
> *certainly*. Kenwood was also not know to use cheap-junk caps in their
> equipment.
>
> HOWEVER: A variac is really no better than a dim-bulb tester unless it
> is equipped with a current meter (amps or watts) that will read the
> actual current draw of the unit. I have been known to RANT on this
> subject at length - but I will spare this group and merely state that
> UNLESS you have the means to measure actual current drawn by the unit

> and at a sufficiently fine degree as to give you useful data, don't
> waste your time with a Variac. It gives you a false sense of
> security.
>
> IF you have the means to measure current - either with your VOM in
> series or with a poor-man's ammeter (measure voltage drop across a 1-
> ohm resistor, for example), this technique is very useful. Raise the
> voltage s-l-o-w-l-y, watching the meter all the time. It will jump up
> (typically) then slide down as the caps charge. Slowly-slowly-nicely-
> nicely until you reach operating voltage over 4-5 minutes or so. And
> KEEP WATCHING!
>
> If the caps start to fail at full B+, you will see that meter creep
> up. If they go anything beyond about 80% (SWAG guess - more below) of
> the nameplate rating of the unit, you have real problems.
>
> Now, here is where I cannot comment beyond the generic - I have no
> idea what the quiescent vs. active current draw is with the Kenwood.
> THIS IS IMPORTANT. As you will not be transmitting or whatever, you
> should be operating at/near the quiescent current. This may be a very
> small percentage of the full nameplate rating - my guess is that this
> is so. You will need to know what that is. If you are operating even
> 5% beyond the "proper" quiescent current, that will be expressed as
> heat somewhere - and eventually *POOF* at some unobtanium or expensive
> part.
>
> You get the point. The idea is to bring power to the beast slowly so
> that failed caps or similar may be discovered before any actual damage
> is done. For this to work you need a means to determine whether the
> unit is taking excess current - and you need to be able to measure
> this in fine-enough increments to be worthwhile. Otherwise, you are
> wasting your time as a small problem or series of small problems will
> be invisible to crude means.
>
> I keep this unit for these sorts of tests:
>
> http://www.oaktreeent.com/web_photos/test_gear/Heathkit_IP-5220_web.jpg
>
> It is an metered Iso-Variac, overkill for once-in-a-while needs, but I
> use it constantly.
>
> Peter Wieck
> Melrose Park, PA

Peter - lots of good stuff in there, but perhaps overkill..like the ac power supply with its own meters - would be simple to use for the methods you describe.

The Kenwood is a "Valve hybrid" - there are 3 tubes in there, a driver and 2 output tubes in //. Filamnets are switchable on/off. Idle current is.....very low, never measured it, had no need to. The light

bulb method does work sufficiently well for the purpose intended.

Andrew VK3BFA.

# 1131. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-22 15:42:45 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g8mmpl$6ca$1@f04n12.cac.psu.edu>
Source record: 4718
Body handling: HTML body converted to readable text

Andrew VK3BFA wrote:
> On Aug 22, 5:06 am, "p...@aol.com" wrote:

> Peter - lots of good stuff in there, but perhaps overkill..like the ac
> power supply with its own meters - would be simple to use for the
> methods you describe.
>
> The Kenwood is a "Valve hybrid" - there are 3 tubes in there, a driver
> and 2 output tubes in //. Filamnets are switchable on/off. Idle
> current is.....very low, never measured it, had no need to. The light
> bulb method does work sufficiently well for the purpose intended.

I think I missed just what type of rig it was. If it a Kenwood TS-830,
the owner has to immediately ship it to me, as those units had a
particular problem that ony I can fix.

I tested out one of those, and fell in love with it. Good sound, Hot
receiver, good looking rig, The big issue with those was the band
changing switch. Not a big deal.

Heck, I'll even pay shipping ;^)

- 73 de Mike N3LI -

# 1132. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-22 15:47:28 UTC
From: Michael Coslo <mjc5@psu.edu>
Message-ID: <g8mn2g$fik$1@f04n12.cac.psu.edu>
Source record: 4719

Michael Coslo wrote:
>
> I think I missed just what type of rig it was. If it a Kenwood TS-830,
> the owner has to immediately ship it to me, as those units had a
> particular problem that ony I can fix.

What a dummy I is. That's a TS-530, not 830

- 73 de Mike N3LI -

## 1133. Amateur Radio and Software Defined Radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-22 16:40:46 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrngatr0e.2m9q.bit-bucket@shell.config.com>
Source record: 4720

http://electronicdesign.com/Articles/Index.cfm?ArticleID=19439

OT, because a homebrew project is covered on page 3 - subtitled:

AN IMPORTANT HAM SDR EFFORT

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
*** Killfiling google posts: <http://jonz.net/ng.htm>

# 1134. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-22 18:52:23 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <2b9b7f90-61d7-42df-a2d1-459a7c6140cc@r66g2000hsg.googlegroups.com>
Source record: 4721

On Aug 17, 6:44 pm, Andrew VK3BFA <vk3...@hotmail.com> wrote:
> and its a pain in the
> arse to set up, connect meters, gingerly spend time slowly
> incrementing the voltage - life is too short to stuff around......
>
> Hey, you got time to do Rocket Science, thats fine. Each to his own.

I think that turning it on, blowing up the capacitors that are gonna blow up, and then replacing the ones that actually did blow up is a fine procedure, myself.

There is a certain pussyfoot attitude about either cranking up the variac gingerly, or simply recapping the whole radio, that is not really appropriate to somebody (me!) who really wants to see smoke coming out at least once in a while.

Only gotcha, if the bad capacitor takes out a transformer, that's a PITA. Not that I've never rewound bad transformers or rewound them for a project, but having to rewind a transformer just because I was impatient is a little embarassing.

Tim.

## 1135. Re: Amateur Radio and Software Defined Radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-22 21:20:27 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <x4Grk.51957$C65.7168@en-nntp-01.dc1.easynews.com>
Source record: 4722

"Allodoxaphobia" <bit-bucket@config.com> wrote in message
news:slrngatr0e.2m9q.bit-bucket@shell.config.com...
> OT, because a homebrew project is covered on page 3 - subtitled:
> AN IMPORTANT HAM SDR EFFORT

It seems almost criminal that GNURadio / USRP isn't mentioned. :-( It's the main ham radio SDR that's being used for VHF/UHF work with correspondingly higher bandwidths. (Whereas HPSDR/Flex-5000/etc. are aimed more at super-weak signals -- more dynamic range -- with correspondingly narrower bandwidths.)

## 1136. Need some N750 caps..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-22 21:36:51 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <fkGrk.2278$_s1.1852@newsfe07.iad>
Source record: 4723

If anyone has some in 5 to 15 pF values, I like to buy
several. Prefer the old ceramic dogbones, if possible.

Pete

# 1137. Re: Need some N750 caps..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-23 01:30:14 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <GKJrk.495$Ro1.136@trnddc04>
Source record: 4724

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:fkGrk.2278$_s1.1852@newsfe07.iad...
> If anyone has some in 5 to 15 pF values, I like to buy
> several. Prefer the old ceramic dogbones, if possible.
>
> Pete
>
These are getting harder to come by. I bought some for my Hallicrafters
Cyclone from Surplus Sales of Nebraska (The "jewelry" store)- but they are
not cheap.

Dale W4OP

# 1138. Re: Need some N750 caps..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-23 01:35:05 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <dPJrk.2902$Jk1.2183@newsfe01.iad>
Source record: 4725

"Dale Parfitt" <parinc1@verizon.net> wrote in message
news:GKJrk.495$Ro1.136@trnddc04...
>
> "Tio Pedro" <radioconnection@cox.net> wrote in message
> news:fkGrk.2278$_s1.1852@newsfe07.iad...
>> If anyone has some in 5 to 15 pF values, I like to buy
>> several. Prefer the old ceramic dogbones, if possible.
>>
>> Pete
>>
> These are getting harder to come by. I bought some for my Hallicrafters
> Cyclone from Surplus Sales of Nebraska (The "jewelry" store)- but they are
> not cheap.
>
> Dale W4OP

Problem is I need a small handful to fine trim the drift on
a set of HBR receiver LO coils. I refuse to pay those prices
for what should be 25 cent parts. Yeah, I know, price of
doing business, only game in town... etc... But, there must
be some lanquishing in junkbox looking for a good home
for a fair price. I'd hate to blow 20 bucks on a bunch of
cheap parts that I may or may not need.

I suspect N750 ceramic discs would work just as well in this
application, and I'll try them if I have too. At least they
are cheap and available.

Pete
>

## 1139. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-23 09:23:13 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <e2e9de01-f0e8-40d9-8d4d-260ef3d046d7@f36g2000hsa.googlegroups.com>
Source record: 4726

On Aug 22, 2:52 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
>
> I think that turning it on, blowing up the capacitors that are gonna
> blow up,
> who really wants to see smoke
> coming out at least once in a while.

You been watching to much myth busters?

> Only gotcha, if the bad capacitor takes out a transformer, that's a
> PITA. Not that I've never rewound bad transformers or rewound them for
> a project, but having to rewind a transformer just because I was
> impatient is a little embarassing.

I think you going to has to jump the fuse to get away with that?
Nothing I hate more than shorted parts especially a shorted fuse.

73 OM
n8zu

# 1140. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-23 09:35:17 UTC
From: JC Morrice <John@pentode.demon.co.uk>
Message-ID: <EZW1+KAVn9rIFwzE@pentode1.demon.co.uk>
Source record: 4727

In article <8bc30cfa-d781-4575-bcd7-6db89615a8f3@m45g2000hsb.googlegroup
s.com>, pfjw@aol.com <pfjw@aol.com> writes

>A couple of disclaimers first:
>
>a) I know diddly/squat about Ham equipment. I am not a Ham.
>b) I have been noodling about with vintage equipment, tube & solid-
>state for now over 30 years, so I am familiar with the species. What I
>write below is a generic approach to (re)starting vintage equipment
>after some years at idle.

...snip...
sounds good

Just to add. In the days when boat anchor stuff was the normal gear,
when items had been on the shelf in storage for long periods, the
electrolytics were not so good then as now :)

Switch on procedure from storage was:

1. Expect the odd "phut and horrible smell." It *will* happen at some
time.

2. Switch on for a few seconds and then off - allows the
electrolytic barrier in the capacitor to start to re-form - the number
of seconds for certain equipment was specified - otherwise about 5
seconds for the first time.

3. Switch off for about 60 minutes.

4. Switch on for 10 secs and then off for 30 mins.

5 Switch on for 30 secs and then off for 30 mins.

6. On for 30 sec off for 10 mins.

7. On for 60 sec off for 5 mins.

8. And so on....

These were valuable equipments and the manufacturer normally laid down a
procedure. The whole idea being to re-form the electrolytic capacitors
and to give other problems time to cool down for inspection and
detection/rectification.

The alternative was just to switch on and then stand back from the bench
with your fingers in your ears and a handkerchief over your nose :D

John
--
JC Morrice
john@pentode.demon.co.uk

# 1141. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-23 10:05:42 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <213d418a-a31a-4489-992b-eba7a2b0e499@v16g2000prc.googlegroups.com>
Source record: 4728

On Aug 23, 7:35 pm, JC Morrice <J...@pentode.demon.co.uk> wrote:
> In article <8bc30cfa-d781-4575-bcd7-6db89615a...@m45g2000hsb.googlegroup
>
>
>

And so, like all good "tinny and bullshit" sessions, we come back to the original question - if Dave hasn't wandered off, in boredom or disgust. And like all good amateur arguments, we have suggestions ranging from ludicrous to....ludicrous.

We have had - an engineered, high tech solution
A stuff it, just power it up solution
The KISS solution - use a light bulb in series
The do it slowly and painstakingly with a metered variac solution
Some reminiscences about the "old days"
Someone else offered to buy the radio, but got their models mixed up.
Answers from people who, well, really....dunno why....

And all valid, all correct - so, Dave - take your pick which one YOU use.......alternatively, there is a TS520/530/820/830 group on Yahoo. You could post your question there - they have heaps of people who lovingly use, restore these old radios - mind you, the answers will be as broad spectrum as here, and LOTS more off em hi hi.

Andrew VK3BFA.

## 1142. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-23 19:39:06 UTC
From: laura halliday <marsgal42@hotmail.com>
Message-ID: <f05b699c-5585-4236-a994-060ee07b06c8@q5g2000prf.googlegroups.com>
Source record: 4729

On Aug 17, 6:12 pm, mrhaney <w4...@cox.net> wrote:
> I am looking for a few (10) diodes 1N270...It is a germanium and used
> in Double Balanced mixers in SSB generation..Most suppliers have a $25
> to $50 min order and I don`t care for that.. thanks  Harold W4PQW

So after all that, any hints on what the original project was? Even
in the 1970s people were speccing matched silicon diodes (e.g. 1N914)
or hot carrier diodes (e.g. 5082-2800) for mixers.

Laura Halliday VE7LDH "Non sequitur. Your ACKS are
Grid: CN89mg uncoordinated."
ICBM: 49 16.05 N 122 56.92 W - Nomad the Network Engineer

# 1143. Re: 4-1000A VALVE/TUBE

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-25 01:12:02 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <b7e5d55d-6404-40cd-87e1-55b8d32efd6a@j22g2000hsf.googlegroups.com>
Source record: 4730

On Aug 16, 10:52 pm, raypsi <RBorow...@gmail.com> wrote:
> > And does anybody know the cold resistance or the filament?
> > I haven't seen any inrush current limiting circuits for the 4-1k.
>
> > 73
>
> > n8zu
>
> I just put my home made amper on the filament. Actually a 2.80 amp
> amper.
> I couldn't find my 7805 I use for a constant current source. So I had
> the 5 ohm resistor in series with my 14 volt regulated supply. My 5
> ohm resistor is 40 ft of cat3 3 pair telephone wire for a total of 240
> ft of 24 AWG wire. I put that in series with the 4-1k filament and
> across 14.0 volt regulated supply it draws 2.80 amps.
> The voltage drop on the filament was 0.100 volts and a filament
> resistance at 0.100 volts is 0.0357 ohms. Funny because at 7.5VAC
> it's exactly 10 times that resistance.
> I can't afford peter dahl transformers. I has to use MOT's for the
> filament screen and plate supplies. I have to use 2 MOT's to get the
> power I need. This works out to my advantage because with 2 filaments
> in series it gives me 7.5VAC CT, but at a current that is only limited
> by the 14AWG wire they use for the winding. Two MOT's 14AWG wire would
> limit the inrush current to about 150 amps of instantaneous current at
> the peak voltage.
>
> 73
>
> n8zu

I almost forgot this thing draws more filament current at a lower
voltage
25 amps at 7.3 volts DC

# 1144. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-25 12:57:46 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <dca7cacc-c6dc-4123-b67a-c6249d39b04d@s50g2000hsb.googlegroups.com>
Source record: 4731

On Aug 23, 5:23 am, raypsi <RBorow...@gmail.com> wrote:
> On Aug 22, 2:52 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
>
>
>
> > I think that turning it on, blowing up the capacitors that are gonna
> > blow up,
> > who really wants to see smoke
> > coming out at least once in a while.
>
> You been watching to much myth busters?

Not really, but a former schoolmate has worked at a place titled
"Center for Non-Destructive Testing" and my first comment to him (like
15 years ago) was "Where's the fun in that?"

> > Only gotcha, if the bad capacitor takes out a transformer, that's a
> > PITA. Not that I've never rewound bad transformers or rewound them for
> > a project, but having to rewind a transformer just because I was
> > impatient is a little embarassing.
>
>  I think you going to has to jump the fuse to get away with that?
> Nothing I hate more than shorted parts especially a shorted fuse.

The fuse is there to help (not guarantee) stop things from catching on
fire and burning down your house.

It's not there to save components.

It is sized based on primary current, not the current capacity of any
individual secondary or the components hooked to any individual
secondary.

Tim N3QE

# 1145. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-25 13:14:20 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <059007d4-db4f-4a13-a21e-7f04d65398f1@z66g2000hsc.googlegroups.com>
Source record: 4732

On Aug 23, 3:39 pm, laura halliday <marsga...@hotmail.com> wrote:
> On Aug 17, 6:12 pm, mrhaney <w4...@cox.net> wrote:
>
> > I am looking for a few (10) diodes 1N270...It is a germanium and used
> > in Double Balanced mixers in SSB generation..Most suppliers have a $25
> > to $50 min order and I don`t care for that.. thanks  Harold W4PQW
>
> So after all that, any hints on what the original project was? Even
> in the 1970s people were speccing matched silicon diodes (e.g. 1N914)
> or hot carrier diodes (e.g. 5082-2800) for mixers.

At least two volumes of "Single Side Band for the Radio Amateur" and
many ARRL handbooks from the 60's show 1N270's used in balanced
mixers.

It was a jellybean of the time, it's odd that someone would not
realize it and slavishly want to use it rather than something more
readily available (and performance-wise far superior) today. Probably
the same guys who insist on carbon-composition resistors everywhere
today too :-).

There are some things that appear in old construction articles that
are worth finding. For example, the BC-453/454/455's tuning capacitors
and drive mechanism are truly superb and I still keep my eyes open for
them today :-).

Tim.

# 1146. Re: 4-1000A VALVE/TUBE

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-25 15:55:26 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <12967cf1-358b-4e19-a2cf-d1a586c504a4@26g2000hsk.googlegroups.com>
Source record: 4733

On Aug 24, 9:12 pm, raypsi <RBorow...@gmail.com> wrote:
> I almost forgot this thing draws more filament current at a lower
> voltage
> 25 amps at 7.3 volts DC.

Filaments like lamps are not ohmic, but I don't think they should ever draw more current at lower voltage. That would mean "negative dynamic resistance".

Seems more likely there's some measurement difficulties. Getting good contact on the filament pins through thermal cycles is often an issue.

Tim N3QE

# 1147. WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 00:30:40 UTC
From: KC0EH <cvest@cox.net>
Message-ID: <n8Isk.8973$Jk1.5308@newsfe01.iad>
Source record: 4734
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

I am looking to buy a synthesized low power AM BCB transmitter for around the house . Homebrew ok. Please state brand , condition , price .

Thanks ,
Charlie , W5COV

# 1148. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 00:48:00 UTC
From: Peter Wieck <pfjw@aol.com>
Message-ID: <98b39f50-7700-4ad5-ae58-526c230925e0@x41g2000hsb.googlegroups.com>
Source record: 4735
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

On Aug 25, 7:30 pm, "KC0EH" <cv...@cox.net> wrote:
> I am looking to buy a synthesized low power AM BCB transmitter for around
> the house . Homebrew ok. Please state brand , condition , price .
>
> Thanks ,
> Charlie , W5COV

For the money, and if you can get to Kutztown, I will have a consignment of SSTRAN AMT3000 units. $80, including all taxes and with the SMT chip already installed.

www.sstran.com for additional information.

Phil is a neighbor and give a very good price for the show as a courtesy to the DVHRC. We choose not to mark them up as a courtesy to attendees.

We recently moved into a 4200 s.f. house (grandkids and all that), the transmitter more than covers it and gets our nearest neighbors and then some with just the kit-supplied wire antenna.

Do a search on this NG, you will get all sorts of additional information on this and many other transmitters.

Peter Wieck
Melrose Park, PA

# 1149. Re: LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 01:02:59 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <JbqdnR-VsInZyy7VnZ2dnUVZ_h-dnZ2d@comcast.com>
Source record: 4736
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

"KC0EH" <cvest@cox.net> wrote in message
news:n8Isk.8973$Jk1.5308@newsfe01.iad...
>I am looking to buy a synthesized low power AM BCB transmitter for around the
>house . Homebrew ok. Please state brand , condition , price .
>
> Thanks ,
> Charlie , W5COV
>

In case you don't get any bites on anything more to your liking, Ramsey has a
kit at
http://www.ramseyelectronics.com/cgi-bin/commerce.exe?preadd=action&key=AM25.
I have one, and have used it for the past 3 years with no problems. The only
thing I can suggest if you settle for this unit is to scrap the supplied wall
wart and get a regulated, filtered 12-15V power supply. It solves a problem
with hum and distortion that the supplied power supply causes. Ramsey has known
about this problem for a long time... don't know if they still ship the kit
with the bad PSU.
Download the manual from their site to get an idea of the complexity of the kit.

Cheers!!!!
--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the
address)

Life is like a roll of toilet paper; the closer it gets to the end, the faster
it goes.

# 1150. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 06:10:33 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.08.26.06.10.33.476693@localhost.localdomain>
Source record: 4737

I have 1N34A's... will they do?

Cheers,

--
Gregg

# 1151. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 15:30:06 UTC
From: laura halliday <marsgal42@hotmail.com>
Message-ID: <c824fc80-07f7-4a7c-b286-c711932b5300@a2g2000prm.googlegroups.com>
Source record: 4738

On Aug 25, 6:14 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> On Aug 23, 3:39 pm, laura halliday <marsga...@hotmail.com> wrote:
>
> > On Aug 17, 6:12 pm, mrhaney <w4...@cox.net> wrote:
>
> > > I am looking for a few (10) diodes 1N270...It is a germanium and used
> > > in Double Balanced mixers in SSB generation..Most suppliers have a $25
> > > to $50 min order and I don`t care for that.. thanks Harold W4PQW
>
> > So after all that, any hints on what the original project was? Even
> > in the 1970s people were speccing matched silicon diodes (e.g. 1N914)
> > or hot carrier diodes (e.g. 5082-2800) for mixers.
>
> At least two volumes of "Single Side Band for the Radio Amateur" and
> many ARRL handbooks from the 60's show 1N270's used in balanced
> mixers.
>
> It was a jellybean of the time, it's odd that someone would not
> realize it and slavishly want to use it rather than something more
> readily available (and performance-wise far superior) today. Probably
> the same guys who insist on carbon-composition resistors everywhere
> today too :-).
>
> There are some things that appear in old construction articles that
> are worth finding. For example, the BC-453/454/455's tuning capacitors
> and drive mechanism are truly superb and I still keep my eyes open for
> them today :-).
>
> Tim.

Indeed. I have several old ARRL and RSGB Handbooks and a
number of older references (including Single Sideband for the
Radio Amateur).

You can see the fashions change. At one time the cool part to
use was the 7360 beam deflection mixer tube; at other times the
challenge was to see how many 40673 MOSFETs you could use
in a single radio. Many of these designs are difficult to reproduce
now.

I'll see your BC-455 tuning capacitor and raise you an Eddystone
dial. :-)

You can make nice radios by applying the right technology to
the problem. My recipe for a stable VFO nowadays is a

postage-stamp size surface mount board mummified in bubble
wrap and stuck to the end of a good, solid air variable capacitor.

Laura Halliday VE7LDH "Non sequitur. Your ACKS are
Grid: CN89mg uncoordinated."
ICBM: 49 16.05 N 122 56.92 W - Nomad the Network Engineer

# 1152. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 17:46:24 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <0c29b9b8-9822-4bde-b266-45447fe77ebf@a2g2000prm.googlegroups.com>
Source record: 4739

On Aug 26, 11:30 am, laura halliday <marsga...@hotmail.com> wrote:
> Indeed. I have several old ARRL and RSGB Handbooks and a
> number of older references (including Single Sideband for the
> Radio Amateur).
>
> You can see the fashions change. At one time the cool part to
> use was the 7360 beam deflection mixer tube; at other times the
> challenge was to see how many 40673 MOSFETs you could use
> in a single radio. Many of these designs are difficult to reproduce
> now.

What's amazing is that some of the SSB rigs appearing in the 60's in the pages of QST use not one, not two, but three 7360's :-).

40673's were also used with wild abandon. If someone wants an honest-to-goodness 40673 they can pay $15 for a NTE221 in a metal can, but most experimenters would use a BF998, obviously a different package but same function.

> I'll see your BC-455 tuning capacitor and raise you an Eddystone
> dial. :-)
>
> You can make nice radios by applying the right technology to
> the problem. My recipe for a stable VFO nowadays is a
> postage-stamp size surface mount board mummified in bubble
> wrap and stuck to the end of a good, solid air variable capacitor.

The brass-screw-in-a-solenoid is something I just tried in my reproduction of the MMR-40 and I am very impressed with its stability and mechanical simplicity as a PTO. A similar but not identical mechanical design is used in the WA6OTP PTO, I haven't tried it yet.

Tim.

# 1153. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 18:26:52 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <d0367098-b46d-4498-8550-4945493f0d38@v26g2000prm.googlegroups.com>
Source record: 4740

On Aug 26, 10:46 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
...
> The brass-screw-in-a-solenoid is something I just tried in my
> reproduction of the MMR-40 and I am very impressed with its stability
> and mechanical simplicity as a PTO. A similar but not identical
> mechanical design is used in the WA6OTP PTO, I haven't tried it yet.
>
> Tim.

Though not actually PTO if it's a brass screw, right?

Cheers,
Tom

# 1154. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 19:05:53 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <6e7b9deb-3bf3-4c09-b6a7-7d1425e4b53f@b1g2000hsg.googlegroups.com>
Source record: 4741

On Aug 26, 2:26 pm, K7ITM <k7...@msn.com> wrote:
> On Aug 26, 10:46 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> ...
>
> > The brass-screw-in-a-solenoid is something I just tried in my
> > reproduction of the MMR-40 and I am very impressed with its stability
> > and mechanical simplicity as a PTO. A similar but not identical
> > mechanical design is used in the WA6OTP PTO, I haven't tried it yet.
>
> > Tim.
>
> Though not actually PTO if it's a brass screw, right?

Permeability of brass is slightly less than air, which is why the PTO goes up in frequency as I screw the brass screw in.

It's not an iron-powder slug (which would go down in frequency as it enters the solenoid) but it's still a PTO.

If you haven't tried them, I highly encourage you look at the PTO in the MMR-40 and the WA6OTP PTO. Completely 100% homebrewable and I'm very happy with the results.

Tim.

# 1155. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 23:10:22 UTC
From: Syl <syl@somewhere.else>
Message-ID: <y30tk.4100$AV5.32109@weber.videotron.net>
Source record: 4742
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Peter Wieck a ï¿½crit :

>
> For the money, and if you can get to Kutztown, I will have a
> consignment of SSTRAN AMT3000 units. $80, including all taxes and with
> the SMT chip already installed.

Peter,

That transmitter is NOT FCC part 15 compliant for what I know.

This would be misleading as the OP requests a part 15 transmitter
BCB.

Syls

# 1156. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 23:41:44 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <7x0tk.10268$Jk1.7415@newsfe01.iad>
Source record: 4743
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

"Syl" <syl@somewhere.else> wrote in message
news:y30tk.4100$AV5.32109@weber.videotron.net...
> Peter Wieck a écrit :
>
>>
>> For the money, and if you can get to Kutztown, I will have a
>> consignment of SSTRAN AMT3000 units. $80, including all taxes and with
>> the SMT chip already installed.
>
>
> Peter,
>
> That transmitter is NOT FCC part 15 compliant for what I know.
>
> This would be misleading as the OP requests a part 15 transmitter
> BCB.
>
> Syls

Syl

I believe it meets the FCC regs regarding "homemade" Part
15 devices; and would be limited to the maximum number
of units allowed per individual--five, if I recall correctly.

Pete

# 1157. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-26 23:59:04 UTC
From: Syl <syl@somewhere.else>
Message-ID: <cN0tk.4103$AV5.32546@weber.videotron.net>
Source record: 4744
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Tio Pedro a ï¿½crit :

> 
> Syl
> 
> I believe it meets the FCC regs regarding "homemade" Part
> 15 devices; and would be limited to the maximum number
> of units allowed per individual--five, if I recall correctly.
> 
> Pete

Dear Senor Pedro,

That "part" is unclear to me. I try to understand what makes
a transmitter Part 15 compliant when homemade as opposed
to a commercial unit. Does the 100mw input still holds
(but owner/builder doesn't have to get "approved" by FCC) or
is it a don't get caught transmitting on a commercial
frequency -i.e. create interferences- and you'll do fine thing ?

Syl

# 1158. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 00:36:16 UTC
From: Peter Wieck <pfjw@aol.com>
Message-ID: <f79bdc49-b88d-4a56-a79c-482710c388b8@t54g2000hsg.googlegroups.com>
Source record: 4745
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

On Aug 26, 6:10 pm, Syl <s...@somewhere.else> wrote:
> Peter Wieck a écrit :
>
>
>
> > For the money, and if you can get to Kutztown, I will have a
> > consignment of SSTRAN AMT3000 units. $80, including all taxes and with
> > the SMT chip already installed.
>
> Peter,
>
> That transmitter is NOT FCC part 15 compliant for what I know.
>
> This would be misleading as the OP requests a part 15 transmitter
> BCB.
>
> Syls

From the website:

· Legal to use in the US, no FCC license required

· Fully compliant with FCC Part 15 regulations

· 100 mW input power

· 100% Modulation

· 20Hz to 20kHz ±1 dB Audio Response

· Very Low Distortion

· Adjustable Audio Compressor/Limiter

· 10 kHz and 9 kHz channel spacing options

· High Quality PC Board and Components

· Comprehensive Instruction Manual

This is a "HOME MADE" unit - which means that it must meet maximum
power radiation requirements, antenna developed length requirements
and various other regulations. EXACTLY the same as the Ramsey kit, the
AES kit, the L'il 7 Kit and any of several others.

What it is NOT is approved to be sold as a full-built unit.

Makes it Part 15 - compliant.

But, by removing the spaces, you can get chapter-and-verse from Phil Bolyn at info at sstran dot com.

Peter Wieck
Melrose Park, PA

# 1159. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 00:40:20 UTC
From: John Byrns <byrnsj@sbcglobal.net>
Message-ID: <byrnsj-7738D4.19402026082008@newsclstr03.news.prodigy.net>
Source record: 4746
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

In article <cN0tk.4103$AV5.32546@weber.videotron.net>, Syl <syl@somewhere.else>
wrote:

> Tio Pedro a crit :
>
> >
> > Syl
> >
> > I believe it meets the FCC regs regarding "homemade" Part
> > 15 devices; and would be limited to the maximum number
> > of units allowed per individual--five, if I recall correctly.
> >
> > Pete
>
> Dear Senor Pedro,
>
> That "part" is unclear to me. I try to understand what makes
> a transmitter Part 15 compliant when homemade as opposed
> to a commercial unit. Does the 100mw input still holds
> (but owner/builder doesn't have to get "approved" by FCC) or
> is it a don't get caught transmitting on a commercial
> frequency -i.e. create interferences- and you'll do fine thing ?

I would have to check the CFR to be sure, but IIRC building a homemade Part 15
compliant transmitter doesn't absolve you from the basic requirements for
operation in the MW broadcast band like keeping the DC input power to the final
below 100 mW and the length of the antenna/ground system to 3 meters or less, I
think homemade status only eliminates the need to do the more complex
certification tests necessary for commercial units.

I also suspect that if you are using a Part 15 transmitter, either homemade or
commercial, and it interferes with a commercial frequency, then it is your
responsibility to resolve the interference problem, or shut the transmitter
down, I don't think commercial units get any special privileges in this regard,
although again I would have to check the CFR to be sure.

--
Regards,

John Byrns

Surf my web pages at, http://fmamradios.com/

# 1160. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 00:57:40 UTC
From: John Byrns <byrnsj@sbcglobal.net>
Message-ID: <byrnsj-6B114F.19574026082008@newsclstr03.news.prodigy.net>
Source record: 4747
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

In article <f79bdc49-b88d-4a56-a79c-482710c388b8@t54g2000hsg.googlegroups.com>,
Peter Wieck <pfjw@aol.com> wrote:

> On Aug 26, 6:10 pm, Syl <s...@somewhere.else> wrote:
> > Peter Wieck a crit :
> >
> > > For the money, and if you can get to Kutztown, I will have a
> > > consignment of SSTRAN AMT3000 units. $80, including all taxes and with
> > > the SMT chip already installed.
> >
> > Peter,
> >
> > That transmitter is NOT FCC part 15 compliant for what I know.
> >
> > This would be misleading as the OP requests a part 15 transmitter
> > BCB.
>
> From the website:
>
> • Legal to use in the US, no FCC license required
>
> • Fully compliant with FCC Part 15 regulations
>
> • 100 mW input power
>
> • 100% Modulation
>
> • 20Hz to 20kHz 1 dB Audio Response
>
> • Very Low Distortion
>
> • Adjustable Audio Compressor/Limiter

This is a misleading statement, the SSTRAN AMT3000 does not include a limiter,
manufacturers claims not withstanding. A traditional limiter as used with AM
transmitters controls the modulation peaks, either by a clipping operation, or
with a high speed peak activated AGC amplifier, the SSTRAN AMT3000 includes
neither of these circuits. The so called "Compressor/Limiter" used in the
SSTRAN AMT3000 is an RMS controlled AGC amplifier with a knee in its compression
curve. The RMS control means that it doesn't pay any attention to the peak
levels that cause over modulation. SSTRAN calls it a "Limiter" because of the
knee in the compression curve, but it fails to operate as expected of a limiter
to prevent over modulation.

--
Regards,

John Byrns

Surf my web pages at, http://fmamradios.com/

# 1161. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 01:24:54 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <S12tk.9822$4s1.1047@newsfe06.iad>
Source record: 4748
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

"Syl" <syl@somewhere.else> wrote in message
news:cN0tk.4103$AV5.32546@weber.videotron.net...
> Tio Pedro a écrit :
>
> Dear Senor Pedro,
>
> That "part" is unclear to me. I try to understand what makes
> a transmitter Part 15 compliant when homemade as opposed
> to a commercial unit. Does the 100mw input still holds
> (but owner/builder doesn't have to get "approved" by FCC) or
> is it a don't get caught transmitting on a commercial
> frequency -i.e. create interferences- and you'll do fine thing ?
>
> Syl

Mon Ami

I tried googling the FCC website, but not much luck...
There is (was) a section that mentioned that it was legal to build a part 15 transmitter, provided it meet the FCC requirements for regarding power, antenna limitations and spectral purity. There was a limit on the number of such devices that could be built and owned by individual as well.

Pete

# 1162. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 02:43:19 UTC
From: Syl <syl@somewhere.else>
Message-ID: <bb3tk.4106$AV5.32984@weber.videotron.net>
Source record: 4749
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Peter Wieck a ï¿½crit :
> On Aug 26, 6:10 pm, Syl <s...@somewhere.else> wrote:
>> Peter Wieck a ï¿½crit :
>>
>>
>>
>>> For the money, and if you can get to Kutztown, I will have a
>>> consignment of SSTRAN AMT3000 units. $80, including all taxes and with
>>> the SMT chip already installed.
>> Peter,
>>
>> That transmitter is NOT FCC part 15 compliant for what I know.
>>
>> This would be misleading as the OP requests a part 15 transmitter
>> BCB.
>>
>> Syls
>
> From the website:
>
>
>
> ï¿½ Legal to use in the US, no FCC license required
>
> ï¿½ Fully compliant with FCC Part 15 regulations
>
> ï¿½ 100 mW input power
>
> ï¿½ 100% Modulation
>
> ï¿½ 20Hz to 20kHz ï¿½1 dB Audio Response
>
> ï¿½ Very Low Distortion
>
> ï¿½ Adjustable Audio Compressor/Limiter
>
> ï¿½ 10 kHz and 9 kHz channel spacing options
>
> ï¿½ High Quality PC Board and Components
>
> ï¿½ Comprehensive Instruction Manual
>
> This is a "HOME MADE" unit - which means that it must meet maximum

> power radiation requirements, antenna developed length requirements
> and various other regulations. EXACTLY the same as the Ramsey kit, the
> AES kit, the L'il 7 Kit and any of several others.
>
> What it is NOT is approved to be sold as a full-built unit.
>
> Makes it Part 15 - compliant.
>
> But, by removing the spaces, you can get chapter-and-verse from Phil
> Bolyn at info at sstran dot com.
>
> Peter Wieck
> Melrose Park, PA

Hi Peter,

Thanks. Several of those specs do bring questions though as they aren't properly defined (unless they are in the full FCC documentation ?

i.e.

a) Just what "very low distortion" means ? To me, very low distortion would be 0,001% as a minimum. But I understand that in the real world of transmitters, 0,1% is probably considered very low distortion figures ? This based on the presumption that attaining 0,001% distortion figures is easier to attain than using tube technology. Correct me if I am wrong.

b) Adjustable compressor/limiter. To what levels ?

c) High Quality PC Board and Components. Does this means the homebrewer can't use Chinese made parts [grin]

Of course I do not mean to start a discussion on these points, merely thinking out loud...;o)

But...I now better understand the requirements for part 15. As It shows, the only difference between a commercial unit and a homebrewer's is the latter does not have to pay labs testing and approval for his "concoction" whereas the former (the manufacturer) has to have the FCC seal of approval and the of course the onerous fee(s) along with the approval tag.

I wonder how the FCC manages the homebrewer's "concoctions", other than reacting to complaint(s) ? I suspect this is what happened to the kit builder whom got fined sometime ago ?

Syl

# 1163. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 07:09:11 UTC
From: Phil Nelson <philnelson@nospam.xyz>
Message-ID: <Ad6dnRihQI5zYCnVnZ2dnUVZ_obinZ2d@giganews.com>
Source record: 4750
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

> I wonder how the FCC manages the homebrewer's "concoctions", other
> than reacting to complaint(s) ? I suspect this is what happened
> to the kit builder whom got fined sometime ago ?

They basically respond to complaints, as I recall. It's a common-sense sort of rule. You can transmit at a power level that covers your house, or your yard at best. You can't go above that level without possibly interfering with your neighbors' reception. Duh. I'm not interested in building a pirate radio station, so I can't imagine why I'd want a transmitter that could broadcast beyond our house.

I dimly recall discussions about that kit builder, but it seems he was selling manufactured units as "kits," or possibly selling non-compliant manufactured units without going through the certification process.

If you're simply piddling around in the basement and trying to build a house-level transmitter, there is no certification process. Just don't interfere with reception in your neighbors' houses, lest they complain.

Common sense rules :-)

Phil Nelson

# 1164. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 08:00:21 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.08.27.08.00.21.672620@localhost.localdomain>
Source record: 4601
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Maybe this will help?

http://lowpowerradio.blogspot.com

Cheers!

# 1165. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 11:53:03 UTC
From: Peter Wieck <pfjw@aol.com>
Message-ID: <373a7eac-32d1-4988-abb3-7c79bf7c61d1@k13g2000hse.googlegroups.com>
Source record: 4602
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Forgive the top posting - note the interpolations.

On Aug 26, 10:43 pm, Syl <s...@somewhere.else> wrote:

> Thanks. Several of those specs do bring questions though as they aren't
> properly defined (unless they are in the full FCC documentation ?

Well, not really - what the FCC requires is apart from many of the specifications shown. Example: US Federal requirements on automobiles write to certain requirements - leather seats is not one of them. Part 15 writes to certain requirements - Accepting stereo inputs, broadcasting 20hz - 20khz, and very low distortion are not amongst them. They are the leather seats.

> a) Just what "very low distortion" means ? To me, very low distortion
> would be 0,001% as a minimum. But I understand that in the real world
> of transmitters, 0,1% is probably considered very low distortion figures
> ? This based on the presumption that attaining 0,001% distortion figures
> is easier to attain than using tube technology. Correct me if I am wrong.

In the specifications - which you have to dig further into the site to find. However from my discussions with Phil, that VLD is relative to most commercial broadcasters and also a function of the much broader bandwidth.

> b) Adjustable compressor/limiter. To what levels ?

Also in the specifications.

> c) High Quality PC Board and Components. Does this means the
> homebrewer can't use Chinese made parts [grin]

I am not so sure how to answer that question. I have seen homebrewers use the functional equivalent of Venusian water buffalo poop in their rigs - as long as it meets the radiation requirements of Part 15, I am not so sure the Feds will care. Phil sources his parts from all over the place - but many of the custom parts are made locally - not in China.

>
> Of course I do not mean to start a discussion on these points,
> merely thinking out loud...;o)

You mean that you are not taking a page from Mr. Byrns' book and attempting to poison the waters around what should be a pretty simple discussion? ;-{ 0>

> But...I now better understand the requirements for part 15. As It shows,
> the only difference between a commercial unit and a homebrewer's is the
> latter does not have to pay labs testing and approval for his
> "concoction" whereas the former (the manufacturer) has to have the FCC
> seal of approval and the of course the onerous fee(s) along with the
> approval tag.

Something like that.

> I wonder how the FCC manages the homebrewer's "concoctions", other
> than reacting to complaint(s) ? I suspect this is what happened
> to the kit builder whom got fined sometime ago ?

Basically, the FCC (as it is presently constituted) is a dumping ground for political hacks owed a small favor and the sons of wealthy political hacks owed a larger favor. There is not a scintilla of competence throughout its political-appointee management and hasn't been for perhaps the last 6 - 20 years (maybe much longer), depending on whose ox was gored most recently. For the most part, its regulations are written so vaguely that the adage "Money talks, the rest walks" covers their behavior. The individual who was assembling SSTRANs for resale got fined by the FCC because a competitor selling a fully-assembled product WITH the FCC compliance certificate at over 10X the cost felt threatened and injured - and had the money and was paying the fees to get action.

It is interesting to note that said kit-builder is back and has done the thing he should have done in the first place to be in full compliance with Part 15 (not sell assembled transmitters) yet still perform the service for his customers - so simple and so obvious that he missed it for years and was fined. He is now bullet-proof in that sense. Care to guess how he is doing it?

Put it this way, every single solitary AM transmitter *KIT* sold in the United States today for single-house use from Vectronics to Ramsey to SSTRAN to the L'il 7 et.al. that calls itself "Part 15 compliant" is subject to the same regulations. It is my opinion based on my experience with most of them that the SSTRAN happens to be the most convenient unit to use and short of a parts-box home-brew represents the best value-for-money in addition to its convenience. That Phil is a distant neighbor and a decent guy does not change any of that.

As the "other" Phil notes, the FCC reacts to complaints. If the complainer is of the party-in-power and also has money may affect the speed and effectiveness of their response - though not necessarily.

Peter Wieck
Melrose Park, PA

# 1166. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 12:27:52 UTC
From: k9uwaREMOVE@THISarrl.netSTUFF
Message-ID: <cLbtk.316203$yE1.221273@attbi_s21>
Source record: 4603
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

In article <cN0tk.4103$AV5.32546@weber.videotron.net>,
syl@somewhere.else says...
>
>
>That "part" is unclear to me. I try to understand what makes
>a transmitter Part 15 compliant
>
>Syl

Part 15 Compliant is one of two possibilities.
#1.. Transmitter is actually FCC type accepted... read EXPENSIVE PROCESS

or

#2.. Home Built or Kit Built unit for your own use... but still meets
the requirements of 100 mW and antenna etc etc etc..

Both #1 and #2 above must NOT interfere with commercial services.

Again Both of the above would only be investigated by FCC if complaints
were filed.

The Guy thats back to building the kits again ... this time legally is
probably still leaving the unit in a somewhat "Kit Form" requiring
enough final construction to the end user to comply with FCC rules.

John k9uwa

# 1167. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 13:13:41 UTC
From: Syl <syl@somewhere.else>
Message-ID: <5qctk.16859$fA6.18474@wagner.videotron.net>
Source record: 4604
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Peter Wieck a ï¿½crit :
>
>> Of course I do not mean to start a discussion on these points,
>> merely thinking out loud...;o)
>
> You mean that you are not taking a page from Mr. Byrns' book and
> attempting to poison the waters around what should be a pretty simple
> discussion? ;-{ 0>

I knew someone would catch this one...

>
> It is interesting to note that said kit-builder is back and has done
> the thing he should have done in the first place to be in full
> compliance with Part 15 (not sell assembled transmitters) yet still
> perform the service for his customers - so simple and so obvious that
> he missed it for years and was fined. He is now bullet-proof in that
> sense. Care to guess how he is doing it?

Dunno how he does it but
the way "I" would do it is build the kit for free and get the
customers to pay for an irrelevant item (say a label) for the whole
cost I would charge building the kit, or better yet, have the customer
install a few parts by themselves and send the kit in for repair
'cause it doesn't work...

Much like those selling pirated CDs from well known "free movies"
archives and not charge for the actual CD content but for the labour and
material cost...

Syl

# 1168. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 13:26:39 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <WcGdnXzjDtqSyyjVnZ2dnUVZ_s_inZ2d@earthlink.com>
Source record: 4605
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Tio Pedro wrote:
>
> "Syl" <syl@somewhere.else> wrote in message
> news:cN0tk.4103$AV5.32546@weber.videotron.net...
> > Tio Pedro a ï¿½crit :
> >
> > Dear Senor Pedro,
> >
> > That "part" is unclear to me. I try to understand what makes
> > a transmitter Part 15 compliant when homemade as opposed
> > to a commercial unit. Does the 100mw input still holds
> > (but owner/builder doesn't have to get "approved" by FCC) or
> > is it a don't get caught transmitting on a commercial
> > frequency -i.e. create interferences- and you'll do fine thing ?
> >
> > Syl
>
> Mon Ami
>
> I tried googling the FCC website, but not much luck...
> There is (was) a section that mentioned that it was legal to build
> a part 15 transmitter, provided it meet the FCC requirements for
> regarding power, antenna limitations and spectral purity. There
> was a limit on the number of such devices that could be built and
> owned by individual as well.
>
> Pete

You want to wade through CFR 47, part 15. That has the laws the FCC
is supposed to enforce.

--
http://improve-usenet.org/index.html

aioe.org, Goggle Groups, and Web TV users must request to be white
listed, or I will not see your messages.

If you have broadband, your ISP may have a NNTP news server included in
your account: http://www.usenettools.net/ISP.htm

There are two kinds of people on this earth:
The crazy, and the insane.
The first sign of insanity is denying that you're crazy.

# 1169. Re: WTB : LPAM Part 15 Transmitter BCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 13:39:53 UTC
From: Peter Wieck <pfjw@aol.com>
Message-ID: <e056beff-f641-4c85-bb05-42351fbda972@m45g2000hsb.googlegroups.com>
Source record: 4606
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

On Aug 27, 9:13 am, Syl <s...@somewhere.else> wrote:

> have the customer install a few parts by themselves and send the kit in for repair
> 'cause it doesn't work...

Yep.You are on the right track - the kit is built all-but-plugging the
chips into the sockets. That is left to the customer and apparently
enough to satisfy the regulations.

Ah, well. I built mine and I enjoy it nearly every day. I also keep an
FM-stereo transmitter so I can feed AM signal to the vintage audio and
FM signal to the vintage radios...

Hey, does Little Vinny have any currency from the middle east? I could
gather a few coins together if you wish?

Peter Wieck
Melrose Park, PA

# 1170. microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 16:40:10 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <cac80340-0d7d-43de-a5d1-ddac0e576fcb@79g2000hsk.googlegroups.com>
Source record: 4607

finally came across an article by VK3HZ that describes how to make a
microwave oven inverter PS work, as a stand alone supply.
the link is:
www.users.bigpond.net.au/dwsmith/hv_inverter.pdf

It's only regulated from the primary side. And you can make it put out
anything from 2000 to 4000 VDC. but at 1300 watts.

So all I have to do is load down the primary to fake out the regulator
into seeing 1300 watts, Or run class A.

The output or the input still has to be filtered

There's an opto coupler that has to see a 110hz square wave, according
to VK3HZ, that'll keep the supply running full tilt as long as there
is power supplied to the inverter.

73
n8zu

# 1171. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-27 19:58:22 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <a8771cea-5ec0-4eb9-8b2e-ad7420f51809@i24g2000prf.googlegroups.com>
Source record: 4608

On Aug 26, 12:05 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
> On Aug 26, 2:26 pm, K7ITM <k7...@msn.com> wrote:
>
> > On Aug 26, 10:46 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> > ...
>
> > > The brass-screw-in-a-solenoid is something I just tried in my
> > > reproduction of the MMR-40 and I am very impressed with its stability
> > > and mechanical simplicity as a PTO. A similar but not identical
> > > mechanical design is used in the WA6OTP PTO, I haven't tried it yet.
>
> > > Tim.
>
> > Though not actually PTO if it's a brass screw, right?
>
> Permeability of brass is slightly less than air, which is why the PTO
> goes up in frequency as I screw the brass screw in.
>
> It's not an iron-powder slug (which would go down in frequency as it
> enters the solenoid) but it's still a PTO.
>
> If you haven't tried them, I highly encourage you look at the PTO in
> the MMR-40 and the WA6OTP PTO. Completely 100% homebrewable and I'm
> very happy with the results.
>
> Tim.

Well, I beg to differ with you about the (main) reason the frequency changes. Consider what happens if you have two coils magnetically coupled and you monitor the inductance of one while you apply a short across the other one. Then consider what you'll see on the inductance meter as you change the coupling between the measured coil and the shorted one. The references I've been able to find so far suggest the permeability of brass is slightly higher than that of air, but I suppose it's a function of the composition of the brass; in any event, I'd bet that the shorted-turn effect is very much larger than the permeability effect with respect to changing the inductance of the oscillator coil.

Cheers,
Tom

# 1172. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-28 11:29:41 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <5372ea10-f80e-4c2c-b2ea-fe5649dbcb75@x41g2000hsb.googlegroups.com>
Source record: 4609

On Aug 27, 3:58 pm, K7ITM <k7...@msn.com> wrote:
> On Aug 26, 12:05 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
>
>
>
> > On Aug 26, 2:26 pm, K7ITM <k7...@msn.com> wrote:
>
> > > On Aug 26, 10:46 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> > > ...
>
> > > > The brass-screw-in-a-solenoid is something I just tried in my
> > > > reproduction of the MMR-40 and I am very impressed with its stability
> > > > and mechanical simplicity as a PTO. A similar but not identical
> > > > mechanical design is used in the WA6OTP PTO, I haven't tried it yet.
>
> > > > Tim.
>
> > > Though not actually PTO if it's a brass screw, right?
>
> > Permeability of brass is slightly less than air, which is why the PTO
> > goes up in frequency as I screw the brass screw in.
>
> > It's not an iron-powder slug (which would go down in frequency as it
> > enters the solenoid) but it's still a PTO.
>
> > If you haven't tried them, I highly encourage you look at the PTO in
> > the MMR-40 and the WA6OTP PTO. Completely 100% homebrewable and I'm
> > very happy with the results.
>
> > Tim.
>
> Well, I beg to differ with you about the (main) reason the frequency
> changes. Consider what happens if you have two coils magnetically
> coupled and you monitor the inductance of one while you apply a short
> across the other one. Then consider what you'll see on the inductance
> meter as you change the coupling between the measured coil and the
> shorted one. The references I've been able to find so far suggest the
> permeability of brass is slightly higher than that of air, but I
> suppose it's a function of the composition of the brass; in any event,
> I'd bet that the shorted-turn effect is very much larger than the
> permeability effect with respect to changing the inductance of the
> oscillator coil.
>
> Cheers,

> Tom

I agree, except Air has no permeability, you can't magnetize air. You can't magnetize brass. What you have is a proximity detector. aka metal detector.

73
n8zu

# 1173. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-28 13:25:35 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <05a467e7-3416-4d2c-94ce-98ab1abe9f4d@d45g2000hsc.googlegroups.com>
Source record: 4610

On Aug 28, 7:29 am, raypsi <RBorow...@gmail.com> wrote:
> On Aug 27, 3:58 pm, K7ITM <k7...@msn.com> wrote:
> > I'd bet that the shorted-turn effect is very much larger than the
> > permeability effect with respect to changing the inductance of the
> > oscillator coil.
>
> > Cheers,
> > Tom
>
> I agree, except Air has no permeability, you can't magnetize air. You
> can't magnetize brass.

I think you're confusing permeability with susceptibility. Even vacuum
has non-zero permeability.

I'm still considering Tom's points. What I know from decades of
experience, is if I put a brass slug into a solenoid, the inductance
goes down by a little bit. "Little" is relative to the effect of a
ferrite slug, which makes inductance go up by a lot in comparison.

The "little" is key for the PTO designs I mention, it allows rather
fine tuning with very simple mechanicals. If I think of it as shorting
turns as it moves in, that is completely out of whack in my head with
the observed changes, because shorting all the turns causes a big
change in inductance, not a small one.

Tim N3QE

# 1174. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-28 16:01:20 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0808281157580.11180@darkstar.example.org>
Source record: 4611

On Thu, 28 Aug 2008, Tim Shoppa wrote:

> I'm still considering Tom's points. What I know from decades of
> experience, is if I put a brass slug into a solenoid, the inductance
> goes down by a little bit. "Little" is relative to the effect of a
> ferrite slug, which makes inductance go up by a lot in comparison.
>
Which of course is why you see iron core and ferrite slugs in high
inductance coils, but in small inductance, like you'd see at VHF,
the slugs were brass.

Or, that tuning wand with some sort of ferrite at one end and brass
at the other, so you could tell whether the tuned circuit was too high
or too low.

At that level, brass and ferrite were seen as the same thing, a means
of varying the inductance. The choice was made by how much variation
you needed, and which way, rather than what action was taking place.

Michael VE2BVW

# 1175. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-28 20:02:23 UTC
From: jimmie68@gmail.com
Message-ID: <91ebb146-390b-4f57-9ebf-700165e1dfd4@m73g2000hsh.googlegroups.com>
Source record: 4612

On Aug 27, 12:40 pm, raypsi <RBorow...@gmail.com> wrote:
> finally came across an article by VK3HZ that describes how to make a
> microwave oven inverter PS work, as a stand alone supply.
> the link is:www.users.bigpond.net.au/dwsmith/hv_inverter.pdf
>
> It's only regulated from the primary side. And you can make it put out
> anything from 2000 to 4000 VDC. but at 1300 watts.
>
> So all I have to do is load down the primary to fake out the regulator
> into seeing 1300 watts, Or run class A.
>
> The output or the input still has to be filtered
>
> There's an opto coupler that has to see a 110hz square wave, according
> to VK3HZ, that'll keep the supply running full tilt as long as there
> is power supplied to the inverter.
>
> 73
> n8zu

If the circuit can be driven from 555 osc perhaps the pulse width can
be controlled from a feedback voltage taken off the output of the
power supply.
I am thinking adding a small winding to the transformer rectifying and
filtering it and supplying this back to control the pulse width of
your osc.

JImmie

# 1176. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-28 20:31:21 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <93d179d5-4096-402b-9d99-9858d5656453@s9g2000prg.googlegroups.com>
Source record: 4613

On Aug 28, 6:25 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
> On Aug 28, 7:29 am, raypsi <RBorow...@gmail.com> wrote:
>
> > On Aug 27, 3:58 pm, K7ITM <k7...@msn.com> wrote:
> > > I'd bet that the shorted-turn effect is very much larger than the
> > > permeability effect with respect to changing the inductance of the
> > > oscillator coil.
>
> > > Cheers,
> > > Tom
>
> > I agree, except Air has no permeability, you can't magnetize air. You
> > can't magnetize brass.
>
> I think you're confusing permeability with susceptibility. Even vacuum
> has non-zero permeability.
>
> I'm still considering Tom's points. What I know from decades of
> experience, is if I put a brass slug into a solenoid, the inductance
> goes down by a little bit. "Little" is relative to the effect of a
> ferrite slug, which makes inductance go up by a lot in comparison.
>
> The "little" is key for the PTO designs I mention, it allows rather
> fine tuning with very simple mechanicals. If I think of it as shorting
> turns as it moves in, that is completely out of whack in my head with
> the observed changes, because shorting all the turns causes a big
> change in inductance, not a small one.
>
> Tim N3QE

Hi Tim,

OK, a 'speriment for you, and another way of looking at it that will
yield the same result:

Make two "slugs," one solid and one hollow. If it's permeability
that's doing it, the hollow one (with thin shell, of course) will have
considerably less effect. If it's the "shorted turn" effect, both
will be about the same.

Consider that there is no time-varying magnetic field inside a shell
made out of good conductor--really zero if it's a superconductor, but
dropping to practically zero after a few skin depths. So you are
removing a volume of magnetic field when you put a conducting slug in
the coil's field. With less field, there's less energy stored, which

implies lower inductance. The same thing happens when you put a coil inside a shield-can: the inductance is reduced. A points that seems to be not well known: the unloaded Q of a helical resonator is less than the Q of the same coil that's not inside a shield. There are graphs available to determine the lowering of inductance by a cylindrical shield around a coil.

Cheers,
Tom

# 1177. Labor Day Party for Radio Aficionados

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-29 00:33:00 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <48b743c2$0$29520$607ed4bc@cv.net>
Source record: 4614

Yuri, K3BU and MountainView Resort in Glen Spey, NY are hosting Labor Day Party with BBQ and live music on Sunday August 31, 2007 at 2:00 pm at the Ardmore Mansion. Special table reserved for Ham Radio aficionados. Check out this enchanting location for the future HamConvention NE. Come and tell the lies and have a great time.

Our famous All-You-Can-Eat Gourmet BBQ
Dance or enjoy the Music of the "Udech" band
Have a great time for only $20/person
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# 1178. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-29 00:39:35 UTC
From: jimmie68@gmail.com
Message-ID: <91d34a93-1f80-4795-a0fd-67c4be7c6790@l42g2000hsc.googlegroups.com>
Source record: 4615

On Aug 28, 4:02 pm, jimmi...@gmail.com wrote:
> On Aug 27, 12:40 pm, raypsi <RBorow...@gmail.com> wrote:
>
>
>
>
>
> > finally came across an article by VK3HZ that describes how to make a
> > microwave oven inverter PS work, as a stand alone supply.
> > the link is:www.users.bigpond.net.au/dwsmith/hv_inverter.pdf
>
> > It's only regulated from the primary side. And you can make it put out
> > anything from 2000 to 4000 VDC. but at 1300 watts.
>
> > So all I have to do is load down the primary to fake out the regulator
> > into seeing 1300 watts, Or run class A.
>
> > The output or the input still has to be filtered
>
> > There's an opto coupler that has to see a 110hz square wave, according
> > to VK3HZ, that'll keep the supply running full tilt as long as there
> > is power supplied to the inverter.
>
> > 73
> > n8zu
>
> If the circuit can be driven from 555 osc perhaps the pulse width can
> be controlled from a feedback voltage taken off the output of the
> power supply.
> I am thinking adding a small winding to the transformer rectifying and
> filtering it and supplying this back to control the pulse width of
> your osc.
>
> JImmie- Hide quoted text -
>
> - Show quoted text -

I was the OP of the origonal thread about the inverter power supplies.
I was actually more interested in learning about the design of the
power supplies so I could possibly build one from scratch. With the
right information this may be easier to do than to modify one from a
microwave oven. I am very grateful for the information. I have a
couple of the Panasonic power supplies unfortunately they dont work
but maybe I can repair them now that I have a schematic. Information

on the transformer would be a good thing to have as I am sure it could be optimized for the desired output voltage and current needed for an amateur amplifier.

With the current transformer on the front end I am guessing this may be the feedback path for regulation. That is to say the power supply is being controlled by the amount of current that is being drawn on the input side of the power supply. If this is the case maybe this input can be taken of the out put of the power supply and then the supply could be voltage regulated instead of being power regulated.

Jimmie

# 1179. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-29 10:53:51 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <035b3d0f-f23e-4ad6-b437-0ae9975d98d6@i76g2000hsf.googlegroups.com>
Source record: 4616

On Aug 28, 9:25 am, Tim Shoppa <sho...@trailing-edge.com> wrote:

>
> > I agree, except Air has no permeability, you can't magnetize air. You
> > can't magnetize brass.
>
> I think you're confusing permeability with susceptibility. Even vacuum
> has non-zero permeability.

The definition I found for:
Permeability (electromagnetism), is the degree of magnetization of a
material in response to a magnetic field

In this case 1 means no permeability.

73

n9zu

# 1180. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-29 11:08:43 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <696c8010-faca-4ca5-ba4f-25ae2472a02d@i76g2000hsf.googlegroups.com>
Source record: 4617

On Aug 28, 4:31 pm, K7ITM <k7...@msn.com> wrote:
> On Aug 28, 6:25 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
>
>
>
> > On Aug 28, 7:29 am, raypsi <RBorow...@gmail.com> wrote:
>
> > > On Aug 27, 3:58 pm, K7ITM <k7...@msn.com> wrote:
> > > > I'd bet that the shorted-turn effect is very much larger than the
> > > > permeability effect with respect to changing the inductance of the
> > > > oscillator coil.
>
> > > > Cheers,
> > > > Tom
>
> > > I agree, except Air has no permeability, you can't magnetize air. You
> > > can't magnetize brass.
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> > I think you're confusing permeability with susceptibility. Even vacuum
> > has non-zero permeability.
>
> > I'm still considering Tom's points. What I know from decades of
> > experience, is if I put a brass slug into a solenoid, the inductance
> > goes down by a little bit. "Little" is relative to the effect of a
> > ferrite slug, which makes inductance go up by a lot in comparison.
>
> > The "little" is key for the PTO designs I mention, it allows rather
> > fine tuning with very simple mechanicals. If I think of it as shorting
> > turns as it moves in, that is completely out of whack in my head with
> > the observed changes, because shorting all the turns causes a big
> > change in inductance, not a small one.
>
> > Tim N3QE
>
> Hi Tim,
>
> OK, a 'speriment for you, and another way of looking at it that will
> yield the same result:
>
> Make two "slugs," one solid and one hollow. If it's permeability
> that's doing it, the hollow one (with thin shell, of course) will have
> considerably less effect. If it's the "shorted turn" effect, both
> will be about the same.
>

> Consider that there is no time-varying magnetic field inside a shell
> made out of good conductor--really zero if it's a superconductor, but
> dropping to practically zero after a few skin depths. So you are
> removing a volume of magnetic field when you put a conducting slug in
> the coil's field. With less field, there's less energy stored, which
> implies lower inductance. The same thing happens when you put a coil
> inside a shield-can: the inductance is reduced. A points that seems
> to be not well known: the unloaded Q of a helical resonator is less
> than the Q of the same coil that's not inside a shield. There are
> graphs available to determine the lowering of inductance by a
> cylindrical shield around a coil.
>
> Cheers,
> Tom

I agree Tom
It's not permeability that changes the inductance it's the mutual inductance that is changing the inductance.
Any metal brought near a coil acts like another coil. If that coil is out of phase. Then the inductance is lowered.
So with brass it's not the permeability it's the inductance of the brass slug and the mutual inductance of the 2 coils that varies the total inductance, of the main coil that the brass slug is in.

Towit a brass slugged adjustable coil is just a variometer.

73
n8zu

# 1181. lot #3 old radio estate sale items-tube CB's-RF generator-SWR/RF meter-more

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-29 11:20:55 UTC
From: "Dwight D. Eisenhower" <rottedHonda@yahoo.com>
Message-ID: <701102fa-f315-4659-b1c3-0412f4642637@f63g2000hsf.googlegroups.com>
Source record: 4618

http://search.ebay.com/_W0QQfgtpZ1QQfrppZ25QQsassZ66Q2dcatalina

SILVERTONE VINTAGE ANTIQUE TUBE RADIO-BAKELITE-works-$$ - $9.98
$20.00 6d 14h 28m
STARLITE MINI ANTIQUE VINTAGE TUBE RADIO-powersup-works - $9.98
$10.00 6d 14h 28m
RCA VINTAGE ANTIQUE HI-FI AM/FM TUNER-TUBE AMPED-RARE-$ - $9.98
$20.00 6d 14h 28m
FIRESTONE VINTAGE WOOD RADIO-TUBE AMPED-POWERS UP-$$$$$ - $9.98
$20.00 6d 14h 28m
VINTAGE PLASTIC BAKELITE OLYMPIC TUBE RADIO-IT WORKS !! - $9.98
$20.00 6d 14h 28m
ARVIN MOD.544A WHITE BAKELITE TUBE RADIO-AM/FM-c.1947-$ - $9.98
$15.00 6d 14h 28m
EMERSON BAKELITE TUBE RADIO-tested/working-antique-$$$$ - $9.98
$15.00 6d 14h 28m
RADIOLA PLASTIC BAKELITE RADIO-TUBE-model 61-8-powersUP - $9.98
$20.00 6d 14h 28m
STROMBERG CARLSON ANTIQUE TUBE RADIO-PARTS/FIX-$$$$$$$$ - $9.98
$15.00 6d 14h 28m
ADMIRAL 6Q12N VINTAGE ANTIQUE BAKELITE RADIO-TUBES-$$$$ - $9.98
$15.00 6d 14h 28m
RCA VICTOR TUBE AMPED RADIO-mod 1X592-clear sound-works - $9.98
$20.00 6d 14h 28m
ANTIQUE ZENITH BAKELITE PLASTIC RADIO-IT WORKS !!-$$$$$ - $9.98
$20.00 6d 14h 28m
MOTOROLA BAKELITE PLASTIC RADIO/CHASSIS-for parts/fix-$ - $9.98
$15.00 6d 14h 28m
HEATHKIT PRECISION FIELD STRENTH-SWR-XTAL METER-HAM/CB- - $24.99
$15.00 6d 14h 28m
HEATHKIT PRECISION FIELD STRENTH-SWR-XTAL METER-HAM/CB- - $24.99
$15.00 6d 14h 28m
DELCO AM/FM/SHORTWAVE FRONT DIAL GLASS/PANEL-NICE-$$$$$ - $9.98
$20.00 6d 14h 28m
DEVRY RF SIGNAL GENERATOR-RADIO HOBBYIST ESTATE SALE-$$ - $9.98
$15.00 6d 14h 28m
DEVRY RF SIGNAL GENERATOR-RADIO HOBBYIST ESTATE SALE-$$ - $9.98
$15.00 6d 14h 28m
(2) VINTAGE TUBE CLOCK RADIOS-GE and ARVIN-both working - $9.98
$25.00 6d 14h 28m
LAFAYETTE HB-111 VINTAGE ANTIQUE TUBE AMPED CB RADIO-$$ - $9.98
$20.00 6d 14h 28m
LAFAYETTE COMSTAT-25 VINTAGE TUBE CB RADIOS-8 CHANNEL-$ - $9.98

$20.00 6d 14h 28m

# 1182. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-29 17:07:25 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <cad7a278-f2dc-4bc0-8af0-610af885db62@r66g2000hsg.googlegroups.com>
Source record: 4619

On Aug 29, 4:08 am, raypsi <RBorow...@gmail.com> wrote:
> On Aug 28, 4:31 pm, K7ITM <k7...@msn.com> wrote:
>
> > On Aug 28, 6:25 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
>
> > > On Aug 28, 7:29 am, raypsi <RBorow...@gmail.com> wrote:
>
> > > > On Aug 27, 3:58 pm, K7ITM <k7...@msn.com> wrote:
> > > > > I'd bet that the shorted-turn effect is very much larger than the
> > > > > permeability effect with respect to changing the inductance of the
> > > > > oscillator coil.
>
> > > > > Cheers,
> > > > > Tom
>
> > > > I agree, except Air has no permeability, you can't magnetize air. You
> > > > can't magnetize brass.
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> > > I think you're confusing permeability with susceptibility. Even vacuum
> > > has non-zero permeability.
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> > > experience, is if I put a brass slug into a solenoid, the inductance
> > > goes down by a little bit. "Little" is relative to the effect of a
> > > ferrite slug, which makes inductance go up by a lot in comparison.
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> > > The "little" is key for the PTO designs I mention, it allows rather
> > > fine tuning with very simple mechanicals. If I think of it as shorting
> > > turns as it moves in, that is completely out of whack in my head with
> > > the observed changes, because shorting all the turns causes a big
> > > change in inductance, not a small one.
>
> > > Tim N3QE
>
> > Hi Tim,
>
> > OK, a 'speriment for you, and another way of looking at it that will
> > yield the same result:
>
> > Make two "slugs," one solid and one hollow.  If it's permeability
> > that's doing it, the hollow one (with thin shell, of course) will have
> > considerably less effect.  If it's the "shorted turn" effect, both
> > will be about the same.
>

> > Consider that there is no time-varying magnetic field inside a shell
> > made out of good conductor--really zero if it's a superconductor, but
> > dropping to practically zero after a few skin depths.  So you are
> > removing a volume of magnetic field when you put a conducting slug in
> > the coil's field.  With less field, there's less energy stored, which
> > implies lower inductance.  The same thing happens when you put a coil
> > inside a shield-can:  the inductance is reduced.  A points that seems
> > to be not well known:  the unloaded Q of a helical resonator is less
> > than the Q of the same coil that's not inside a shield.  There are
> > graphs available to determine the lowering of inductance by a
> > cylindrical shield around a coil.
>
> > Cheers,
> > Tom
>
> I agree Tom
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> inductance that is changing the inductance.
> Any metal brought near a coil acts like another coil. If that coil is
> out of phase. Then the inductance is lowered.
> So with brass it's not the permeability it's the inductance of the
> brass slug and the mutual inductance of the 2 coils that varies the
> total inductance, of the main coil that the brass slug is in.
>
> Towit a brass slugged adjustable coil is just a variometer.
>
> 73
> n8zu

Kind of a variometer with external connections to only one of the coils and the other one shorted out, I suppose. ;-) If you have an actual variometer with two coils you can put in series, you can get significantly more inductance variation than with a brass (or copper) slug. In the case of series coils, you can both add and subtract: you get the sum of the self-inductances of the two coils, plus OR minus the sum of the mutual inductances. If the coils are tightly coupled (not particularly easy to make, mechanically, for one coil rotatable inside another...), the mutual inductances are nearly equal to the self inductances--so for example if k=0.8 max and the coil self-inductances are 1uH each, you can vary between 0.4uH and 3.6uH total, a 9:1 variation. If you could manage to squeeze k(max) up to 0.9 through some heroic effort, you could go from 0.2uH to 3.8uH or 19:1 variation, enough to tune a tank over a 4:1 frequency ratio. Q isn't very good with the coils opposing, though, since you still have the same copper losses as when the coils are aiding.

Cheers,
Tom

## 1183. info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-31 16:05:11 UTC
From: confused <confused.300917e@radiobanter.com>
Message-ID: <confused.300917e@radiobanter.com>
Source record: 4620

anyone seen a surface mount part only markings on it are d k 9 z.it's on
a kenwood handheld tranceiver of mine which has burnt out.would
appreciate any info?
many thanks

--
confused

## 1184. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-08-31 22:02:46 UTC
From: Joe LeKostaj <joe@falseaddress2004.net>
Message-ID: <joe-5AD602.17024631082008@comcast.dca.giganews.com>
Source record: 4621

Is it a plastic bodied component? Does it have one terminal at each end?
If yes, I'm guessing it's a diode.

-Joe

In article <confused.300917e@radiobanter.com>,
confused <confused.300917e@radiobanter.com> wrote:

> anyone seen a surface mount part only markings on it are d k 9 z.it's on
> a kenwood handheld tranceiver of mine which has burnt out.would
> appreciate any info?
> many thanks

# 1185. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-01 07:50:08 UTC
From: confused <confused.3018e9c@radiobanter.com>
Message-ID: <confused.3018e9c@radiobanter.com>
Source record: 4622

Joe LeKostaj;644551 Wrote:
> Is it a plastic bodied component? Does it have one terminal at each end?
>
> If yes, I'm guessing it's a diode.
>
> -Joe
>
>
> In article confused.300917e@radiobanter.com,
> confused confused.300917e@radiobanter.com wrote:
> -
> anyone seen a surface mount part only markings on it are d k 9 z.it's
> on
> a kenwood handheld tranceiver of mine which has burnt out.would
> appreciate any info?
> many thanks-

hi joe thanks for your response.it has 3 pins on one side and on
thicker pin like a small heatsink looks like this
http://tinyurl.com/5ltz2j
i'd appreciate any help on where to get another or an equivalant.i've
looked through shed loads of smt code books online cant find same
code.i've tried contacting kenwood????

thankyou

--
confused

# 1186. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-01 13:00:00 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <rHRuk.19782$_s1.3030@newsfe07.iad>
Source record: 4623

Ahh, so its a transistor

Do you have a schematic? Is there another transistor with the same
markings?

A lot of times transistors are pretty generic and you can throw in "any old
thing". If that is the case, you should be able to tell from the schematic.
If not, and you have another, perhaps someone has a semiconductor analyzer
and can measure the parameters of a good one, and then you can figure a
replacement based on the parameters.

Of course, you would hope that Kenwood would be anxious to help

..

"confused" <confused.3018e9c@radiobanter.com> wrote in message
news:confused.3018e9c@radiobanter.com...
>
> Joe LeKostaj;644551 Wrote:
>> Is it a plastic bodied component? Does it have one terminal at each end?
>>
>> If yes, I'm guessing it's a diode.
>>
>> -Joe
>>
>>
>> In article confused.300917e@radiobanter.com,
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>> appreciate any info?
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> i'd appreciate any help on where to get another or an equivalant.i've
> looked through shed loads of smt code books online cant find same
> code.i've tried contacting kenwood????
>
> thankyou
>
>
>

>
> --
> confused

# 1187. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-01 13:50:22 UTC
From: Joe LeKostaj <joe@falseaddress2004.net>
Message-ID: <joe-CDE3A1.08502201092008@comcast.dca.giganews.com>
Source record: 4624

In article <confused.3018e9c@radiobanter.com>,
confused <confused.3018e9c@radiobanter.com> wrote:
>
> hi joe thanks for your response.it has 3 pins on one side and on
> thicker pin like a small heatsink looks like this
> http://tinyurl.com/5ltz2j
> i'd appreciate any help on where to get another or an equivalant.i've
> looked through shed loads of smt code books online cant find same
> code.i've tried contacting kenwood????
>
> thankyou

It could be a transistor as the other poster mentioned, but it could also be a voltage regulator IC. Your best bet would be to obtain a schematic and/or parts location diagram for your radio to help ID the component. Then your next stop would be Digi-Key or Mouser to look for a replacement.

Also, try to determine what caused the part to fail before installing the new one so it doesn't meet the same fate.

-Joe

# 1188. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-01 14:07:29 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <w5udnTyrqtO0aibVnZ2dnUVZ8hydnZ2d@pipex.net>
Source record: 4625

Joe LeKostaj wrote:
> In article <confused.3018e9c@radiobanter.com>,
> confused <confused.3018e9c@radiobanter.com> wrote:
>> hi joe thanks for your response.it has 3 pins on one side and on
>> thicker pin like a small heatsink looks like this
>> http://tinyurl.com/5ltz2j
>> i'd appreciate any help on where to get another or an equivalant.i've
>> looked through shed loads of smt code books online cant find same
>> code.i've tried contacting kenwood????
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> component. Then your next stop would be Digi-Key or Mouser to look for a
> replacement.
>
> Also, try to determine what caused the part to fail before installing
> the new one so it doesn't meet the same fate.
>
> -Joe
==========
The OP did not mention the handheld radio model ,other than it is from
Kenwood. An instruction manual with circuit diagramme(s) of the
relevant radio can highly likely be found at : www.mods.dk

Frank GM0CSZ / KN6WH

## 1189. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-01 22:30:28 UTC
From: confused <confused.302375b@radiobanter.com>
Message-ID: <confused.302375b@radiobanter.com>
Source record: 4627

Highland Ham;644645 Wrote:
> Joe LeKostaj wrote:-
> In article confused.3018e9c@radiobanter.com,
> confused confused.3018e9c@radiobanter.com wrote:-
> hi joe thanks for your response.it has 3 pins on one side and on
> thicker pin like a small heatsink looks like this
> http://tinyurl.com/5ltz2j
> i'd appreciate any help on where to get another or an equivalant.i've
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>
> Kenwood. An instruction manual with circuit diagramme(s) of the
> relevant radio can highly likely be found at : www.mods.dk
>
> Frank GM0CSZ / KN6WH

hi,
thanks to all responders .there are three on the same board.the model
is a th-26 handheld 2m.i've checked all the surrounding resistors and
nearby passives .i think its a power supply problem.i dont want to
power it up yet until i find out what this part doesi dont want to take
another one of these ants lol out and check it out of circuit.smt is not
my thing.i've searched for a free schematic so if anyone out there's got
the schematic that'll be great .i'll take on board what you guys have
said many thanks for taking the time.

--
confused

# 1190. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-01 23:48:50 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <2f1f1e91-495b-4a83-b341-648724245d06@p25g2000hsf.googlegroups.com>
Source record: 4626

On Aug 28, 8:39 pm, jimmi...@gmail.com wrote:
> On Aug 28, 4:02 pm, jimmi...@gmail.com wrote:
>
>
>
>
>
> > On Aug 27, 12:40 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > finally came across an article by VK3HZ that describes how to make a
> > > microwave oven inverter PS work, as a stand alone supply.
> > > the link is:www.users.bigpond.net.au/dwsmith/hv_inverter.pdf
>
> > > It's only regulated from the primary side. And you can make it put out
> > > anything from 2000 to 4000 VDC. but at 1300 watts.
>
> > > So all I have to do is load down the primary to fake out the regulator
> > > into seeing 1300 watts, Or run class A.
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> > > The output or the input still has to be filtered
>
> > > There's an opto coupler that has to see a 110hz square wave, according
> > > to VK3HZ, that'll keep the supply running full tilt as long as there
> > > is power supplied to the inverter.
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> > If the circuit can be driven from 555 osc perhaps the pulse width can
> > be controlled from a feedback voltage taken off the output of the
> > power supply.
> > I am thinking adding a small winding to the transformer rectifying and
> > filtering it and supplying this back to control the pulse width of
> > your osc.
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> > JImmie- Hide quoted text -
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> power supplies so I could possibly build one from scratch. With the
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> microwave oven. I am very grateful for the information. I have a

> couple of the Panasonic power supplies unfortunately they dont work
> but maybe I can repair them now that I have a schematic. Information
> on the transformer would be a good thing to have as I am sure it could
> be optimized for the desired output voltage and current needed for an
> amateur amplifier.
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> With the current transformer on the front end I am guessing this may
> be the feedback path for regulation. That is to say the power supply
> is being controlled by the amount of current that is being drawn on
> the input side of the power supply. If this is the case maybe this
> input can be taken of the out put of the power supply and then the
> supply could be voltage regulated instead of being power regulated.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

Hey Jimmie

I suppose that you could use the duty cycle feature of this supply to
control the output
but I'd need a bank of 450WVDC caps to supply filtering.
So say the power of the amp drops: the supply will compensate by
increasing the voltage
But with feedback I could drop the duty cycle thru the opto coupled
input. Thus causing a drop in voltage which the filter would handle.
By running the inverter at another lower duty cycle I can control the
output voltage.

I would suggest at least a bank of 16, 450WVDC for a little head room.
Plus that would take out the 120 cycle ripple.

73

n8zu

# 1191. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-02 00:49:09 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <e204d6d8-bd20-41ca-87b3-71d976ad02a5@r66g2000hsg.googlegroups.com>
Source record: 4628

On Sep 1, 6:30 pm, confused <confused.3023...@radiobanter.com> wrote:
> Highland Ham;644645 Wrote:
>
>
>
>
>
> > Joe LeKostaj wrote:-
> > In article confused.3018...@radiobanter.com,
> > confused confused.3018...@radiobanter.com wrote:-
> > hi joe thanks for your response.it has 3 pins on one side and on
> > thicker pin like a small heatsink looks like this
> >http://tinyurl.com/5ltz2j
> > i'd appreciate any help on where to get another or an equivalant.i've
> > looked through shed loads of smt code books online cant find same
> > code.i've tried contacting kenwood????
>
> > thankyou-
>
> > It could be a transistor as the other poster mentioned, but it could
> > also be a voltage regulator IC. Your best bet would be to obtain a
> > schematic and/or parts location diagram for your radio to help ID the
>
> > component. Then your next stop would be Digi-Key or Mouser to look for
> > a
> > replacement.
>
> > Also, try to determine what caused the part to fail before installing
>
> > the new one so it doesn't meet the same fate.
>
> > -Joe-
> > ========================================
> > The OP did not mention the handheld radio model ,other than it is from
>
> > Kenwood.  An instruction manual with circuit diagramme(s) of the
> > relevant radio can highly likely be found at :  www.mods.dk
>
> > Frank   GM0CSZ / KN6WH
>
> hi,
> thanks to all responders .there are three on the same board.the model
> is a th-26 handheld 2m.i've checked all the surrounding resistors and
> nearby passives .i think its a power supply problem.i dont want to

> power it up yet until i find out what this part doesi dont want to take
> another one of these ants lol out and check it out of circuit.smt is not
> my thing.i've searched for a free schematic so if anyone out there's got
> the schematic that'll be great .i'll take on board what you guys have
> said many thanks for taking the time.
>
> --
> confused- Hide quoted text -
>
> - Show quoted text -

More than likely your talking about a transistor maybe a mosfet
The center lead is the collector or drain.
Look for the same numbers on other parts
and measure the forward to back ratio. To determine the kind of
semi it is. should be quite ez. Mostly they using transistors like
this for switching or buffers
so I don't think it could be a darlington.
It's either a npn or pnp.
less likely a FET n channel or p channel
It could still be a zener or a dual diode
Zeners they connect the 2 leads together
And a dual diode will have the same reading on each junction.

73
n8zu

# 1192. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-02 01:57:28 UTC
From: jimmie68@gmail.com
Message-ID: <eff414ad-3498-41b5-b0d3-0c8c2bc67daf@m45g2000hsb.googlegroups.com>
Source record: 4629

On Sep 1, 7:48 pm, raypsi <RBorow...@gmail.com> wrote:
> On Aug 28, 8:39 pm, jimmi...@gmail.com wrote:
>
>
>
>
>
>
> > On Aug 28, 4:02 pm, jimmi...@gmail.com wrote:
>
> > > On Aug 27, 12:40 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > > finally came across an article by VK3HZ that describes how to make a
> > > > microwave oven inverter PS work, as a stand alone supply.
> > > > the link is:www.users.bigpond.net.au/dwsmith/hv_inverter.pdf
>
> > > > It's only regulated from the primary side. And you can make it put out
> > > > anything from 2000 to 4000 VDC. but at 1300 watts.
>
> > > > So all I have to do is load down the primary to fake out the regulator
> > > > into seeing 1300 watts, Or run class A.
>
> > > > The output or the input still has to be filtered
>
> > > > There's an opto coupler that has to see a 110hz square wave, according
> > > > to VK3HZ, that'll keep the supply running full tilt as long as there
> > > > is power supplied to the inverter.
>
> > > > 73
> > > > n8zu
>
> > > If the circuit can be driven from 555 osc perhaps the pulse width can
> > > be controlled from a feedback voltage taken off the output of the
> > > power supply.
> > > I am thinking adding a small winding to the transformer rectifying and
> > > filtering it and supplying this back to control the pulse width of
> > > your osc.
>
> > > JImmie- Hide quoted text -
>
> > > - Show quoted text -
>
> > I was the OP of the origonal thread about the inverter power supplies.
> > I was actually more interested in learning about the design of the
> > power supplies so I could possibly build one from scratch. With the

> > right information this may be easier to do than to modify one from a
> > microwave oven. I am very grateful for the information. I have a
> > couple of the Panasonic power supplies unfortunately they dont work
> > but maybe I can repair them now that I have a schematic. Information
> > on the transformer would be a good thing to have as I am sure it could
> > be optimized for the desired output voltage and current needed for an
> > amateur amplifier.
>
> > With the current transformer on the front end I am guessing this may
> > be the feedback path for regulation. That is to say the power supply
> > is being controlled by the amount of current that is being drawn on
> > the input side of the power supply. If this is the case maybe this
> > input can be taken of the out put of the power supply and then the
> > supply could be voltage regulated instead of being power regulated.
>
> > Jimmie- Hide quoted text -
>
> > - Show quoted text -
>
> Hey Jimmie
>
> I suppose  that you could use the duty cycle feature of this supply to
> control the output
> but I'd need a bank of 450WVDC caps to supply filtering.
> So say the power of the amp drops: the supply will compensate by
> increasing the voltage.

.
> But with feedback I could drop the duty cycle thru the opto coupled
> input. Thus causing a drop in voltage which the filter would handle.
> By running the inverter at another lower duty cycle I can control the
> output voltage.
>
> I would suggest at least a bank of 16, 450WVDC for a little head room.
> Plus that would take out the 120 cycle ripple.
>
> 73
>
> n8zu- Hide quoted text -
>
> - Show quoted text -

Thats pretty much my idea.
In radars something very similar to develop 6KV to charge the PFN. If
you could analyze the circuit where the current sample is picked off
the AC mains that would tell us a lot about what would be needed to
develop the proper feedback signal off of the switching transformer.
Unfortunately I am without power supply at the moment. Well I have one
but my wife has forbid me to touch it. That is her primary cooking
device As Dave idicated the rectifiers for the output of the pwer
supply are configured as a doubler and it could be configured as a

bridge if you wanted lower voltage. I am thinking maybe( a lot of supposig here) this thing may be configured from 1500 to nearly 5kv by using a combination af feedback adjustment and rectifier configuration.

I agree with about the caps,

I emailed Dave and he pretty much agrees with my idea at least in theory but he has dropped the project at least for now.

didnt you say you had a source for these power supplies.

Anyone who gets this to work would surely have some serious ham radio bragging rights.

Jimmie

## 1193. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-02 04:14:06 UTC
From: JB <nospam@goofball.net>
Message-ID: <i43vk.207$Af3.14@trnddc06>
Source record: 4630

> ========================================
> The OP did not mention the handheld radio model ,other than it is from
> Kenwood. An instruction manual with circuit diagramme(s) of the
> relevant radio can highly likely be found at : www.mods.dk
>
> Frank GM0CSZ / KN6WH

The Service Manuals are available either as a free download from various places or can be bought online and shipped overnight for a decent price. All I have seen have extensive parts lists and detailed schematics and board prints. You head needs to be there if the part is unknown. It could be bipolar, fet, or even a regulator. If you don't know what model radio you have, why not?

# 1194. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-02 09:41:41 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <b19ff922-ad68-4077-8b1b-227fcadea55a@v16g2000prc.googlegroups.com>
Source record: 4631

On Sep 1, 2:05 am, confused <confused.3009...@radiobanter.com> wrote:
> anyone seen a surface mount part only markings on it are d k 9 z.it's on
> a kenwood handheld tranceiver of mine which has burnt out.would
> appreciate any info?
> many thanks
>
> --
> confused

you need to do it logically and scientifically, which is the basis of
our hobby.

1.Get the service manual.
2.Get the part no, try Kenwood, if no go, then
3.Look at circuit diagram, identify component, replace with similar -
its unlikely to be critical.

I suspect you are out of your depth at this stage in your amateur
career, and perhaps it would be wise to seek the help of a local
technician or knowledgeable amateur - your local club could probably
help with contact details...

Andrew VK3BFA.

## 1195. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-02 10:08:15 UTC
From: Highland Ham <abcgm0csz.kn6whxyz@dsl.pipex.com>
Message-ID: <rpCdnfvqmJMLjSDVRVnytAA@pipex.net>
Source record: 4632

confused wrote:
> Highland Ham;644645 Wrote:
>> Joe LeKostaj wrote:-
>> In article confused.3018e9c@radiobanter.com,
>> confused confused.3018e9c@radiobanter.com wrote:-
>> hi joe thanks for your response.it has 3 pins on one side and on
>> thicker pin like a small heatsink looks like this
>> http://tinyurl.com/5ltz2j
>> i'd appreciate any help on where to get another or an equivalant.i've
>> looked through shed loads of smt code books online cant find same
>> code.i've tried contacting kenwood????
>>
>> thankyou-
>>
>> It could be a transistor as the other poster mentioned, but it could
>> also be a voltage regulator IC. Your best bet would be to obtain a
>> schematic and/or parts location diagram for your radio to help ID the
>>
>> component. Then your next stop would be Digi-Key or Mouser to look for
>> a
>> replacement.
>>
>> Also, try to determine what caused the part to fail before installing
>>
>> the new one so it doesn't meet the same fate.
>>
>> -Joe-
>> ========================================
>> The OP did not mention the handheld radio model ,other than it is from
>>
>> Kenwood. An instruction manual with circuit diagramme(s) of the
>> relevant radio can highly likely be found at : www.mods.dk
>>
>> Frank GM0CSZ / KN6WH
>
> hi,
> thanks to all responders .there are three on the same board.the model
> is a th-26 handheld 2m.i've checked all the surrounding resistors and
> nearby passives .i think its a power supply problem.i dont want to
> power it up yet until i find out what this part doesi dont want to take
> another one of these ants lol out and check it out of circuit.smt is not
> my thing.i've searched for a free schematic so if anyone out there's got
> the schematic that'll be great .i'll take on board what you guys have
> said many thanks for taking the time.

==========
Have a look at www.mods.dk
Manuals ----> Kenwood
TH-26 Instruction Manual .zip
TH-26 Service Manual.zip

You can only download 1 manual within a 24 hrs period unless you make a
donation towards maintenance of the web site.
So 1 manual today ,another manual tomorrow ,etc

Frank GM0CSZ / KN6WH

# 1196. Re: SOLA Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-02 16:00:49 UTC
From: vinnygalbo@gmail.com
Message-ID: <a019f100-2265-452d-9733-0abb40647892@k30g2000hse.googlegroups.com>
Source record: 4633

On Jul 27, 5:40 am, jimmi...@gmail.com wrote:
> I have a few SOLA brick type power supplies that were given to me. I
> am looking for schematics so I can repair them. On some the problems
> were pretty obvious. Bad filter caps, rectifiers pass transistors.
> These were easy to repair. I suspect they are all type 723 regulator
> based but I am not absolutely sure as one power supply has an IC that
> is clearly an op-amp, this does not appear to be an origonal chip.
> Other power supplies have parts missing. Any help would be greatly
> appreciated.
>
> Jimmie.

The follwing page might help.

http://www.clrwtr.com/Sola-Hevi-Duty-Product-Selection-Guide.htm

## 1197. Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-02 20:12:40 UTC
From: Gary@removenospamandputkf9cm.com
Message-ID: <BKadnaAIB4u3AyDVnZ2dnUVZ_gmdnZ2d@giganews.com>
Source record: 4634

I am looking for some Heterodyne conversion crystals for a receiver I am making.
The frequencies are: 5 MHz, 7 MHz, 10.5 MHz, 13.5 MHz, 17.5 MHz and 21.5 MHz.
The variable mixing frequency will be from 3 to 3.5 MHz. I would prefer all the same type holder.

TNX de Gary, KF9CM

# 1198. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-03 12:16:38 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <bca84992-9c64-4496-97e4-164a610f1609@a70g2000hsh.googlegroups.com>
Source record: 4635

Hey Gary,

Rocks aren't cheap here: http://www.icmfg.com/thruhole_crystals.html
Maybe in 9 land they pave the streets with gold.
Personally I'd go with a programmable divider or PLL.

Maybe you like retro, then I'd get some old rocks the ones
you can take apart and grind them down to git's the freq's you need.
I recall grinding some of these to get them into the novice band back
40 yrs ago.
And putting a pencil mark on the quartz to get them to go down in
frequency.
FT243 style can be found here maybe still: http://www.af4k.com/crystals.htm

73 OM

n8zu

On Sep 2, 4:12 pm, Gary@ removenospamandputkf9cm.com wrote:
> I am looking for some Heterodyne conversion crystals for a receiver I am
> making.
> The frequencies are: 5 MHz, 7 MHz, 10.5 MHz, 13.5 MHz, 17.5 MHz and 21.5
> MHz.
> The variable mixing frequency will be from 3 to 3.5 MHz. I would prefer all
> the same type holder.
>
> TNX de Gary, KF9CM

# 1199. National NC300. Any known popular mods?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-03 15:12:18 UTC
From: Paul P <"REMOVE paul"@REMOVE>
Message-ID: <mPxvk.492$Wd.486@trnddc01>
Source record: 4636

Gentlemen and any Ladies,

I have a National NC300 that I will be restoring. Were there any popular
mods to this radio? Also:

Are there any particular problems like a known arching wafer switch?
before I get into this exciting restoration project?
What other Hints and Kinks should I be aware of?

Thanks in advance,

Paul P.

# 1200. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-03 18:54:01 UTC
From: Leon <leon355@btinternet.com>
Message-ID: <9e2cc09e-2982-4103-b29c-a65a9e2e7e5f@d45g2000hsc.googlegroups.com>
Source record: 4637

On 2 Sep, 21:12, Gary@ removenospamandputkf9cm.com wrote:
> I am looking for some Heterodyne conversion crystals for a receiver I am
> making.
> The frequencies are: 5 MHz, 7 MHz, 10.5 MHz, 13.5 MHz,  17.5 MHz and 21.5
> MHz.
> The variable mixing frequency will be from 3 to 3.5 MHz. I would prefer all
> the same type holder.
>
> TNX de Gary, KF9CM

The Si570 will generate those frequencies, apart from the 5 MHz.

Leon

## 1201. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-03 18:54:17 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0809031447550.5386@darkstar.example.org>
Source record: 4638

On Wed, 3 Sep 2008, raypsi wrote:

> Hey Gary,
>
> Rocks aren't cheap here: http://www.icmfg.com/thruhole_crystals.html
> Maybe in 9 land they pave the streets with gold.
> Personally I'd go with a programmable divider or PLL.
>
> Maybe you like retro, then I'd get some old rocks the ones
> you can take apart and grind them down to git's the freq's you need.

And you can't grind them unless they are quite close to the desired frequency. Grinding by hand will be too uneven, so the crystal will stop working if you try to grind it more than a tiny bit.

It also relies on a big stock of crystals spread around so you can find one sufficiently close enough, something that did seem possible in the years after WWII, but after all this time attrition may have reduced the stock considerably.

And realistically, they also have to be bulky FT-243 holders, since those you can open by removing screws, and the blank is held in place with pressure. More recent holder types require desoldering the case, and figuring out how to remove the blank and then get it back in place when it's soldered in place (or something like that I can't remember how the blank is connected).

One of the odd things is that if one has to buy new crystals, a synthesizer will likely be far cheaper. In the early seventies, synthesizers made a big splash because everyone wanted lots of channels on 2m FM, and the need to have them ground to frequency (and to equipment) made it all very costly, so synthesizers despite their cost and bulk became the norm.

Almost forty years later, a synthesizer for a handful of crystals would still be comparatively bulky, but would be even cheaper than in the early seventies.

Michael VE2BVW

# 1202. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-03 19:10:38 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0809031509230.5386@darkstar.example.org>
Source record: 4639

On Wed, 3 Sep 2008, Leon wrote:

> On 2 Sep, 21:12, Gary@ removenospamandputkf9cm.com wrote:
>> I am looking for some Heterodyne conversion crystals for a receiver I am
>> making.
>> The frequencies are: 5 MHz, 7 MHz, 10.5 MHz, 13.5 MHz,  17.5 MHz and 21.5
>> MHz.
>> The variable mixing frequency will be from 3 to 3.5 MHz. I would prefer all
>> the same type holder.
>>
>> TNX de Gary, KF9CM
>
> The Si570 will generate those frequencies, apart from the 5 MHz.
>
> Leon
>
>

Of course, 5MHz is the one in the bunch that is bound to be easy
to get (and if it's not, 10MHz makes it almost as easy) and
would provide the clock for the synthezier if it needs an external
one.

Michael VE2BVW

# 1203. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-03 19:57:37 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <khptb4hqblcihdmq4igk9s64kcoc0cr5qo@4ax.com>
Source record: 4640

On Wed, 3 Sep 2008 14:54:17 -0400, Michael Black <et472@ncf.ca> wrote:

>On Wed, 3 Sep 2008, raypsi wrote:
>
>> Hey Gary,
>>
>> Rocks aren't cheap here: http://www.icmfg.com/thruhole_crystals.html
>> Maybe in 9 land they pave the streets with gold.
>> Personally I'd go with a programmable divider or PLL.
>>
>> Maybe you like retro, then I'd get some old rocks the ones
>> you can take apart and grind them down to git's the freq's you need.
>
>And you can't grind them unless they are quite close to the desired
>frequency. Grinding by hand will be too uneven, so the crystal will
>stop working if you try to grind it more than a tiny bit.
>
My personal experience is an FT-243 crystal's frequency can be
increased by several hundred kilohertz through grinding. A more
abrasive media is needed for the slurry than scouring powder can
provide. Permatex 34A valve grinding compound works FB. Most of my 80M
rocks (26 between 3.5 & 3.6 MHz) were originally cut for 3237 kHz.
Many of my 40M crystals were moved several hundred kHz as well.

The key to grinding is not to try doing too much at once. Let the
abrasive do the cutting, no downward pressure is need from the
fingers..

>It also relies on a big stock of crystals spread around so you can
>find one sufficiently close enough, something that did seem possible
>in the years after WWII, but after all this time attrition may have
>reduced the stock considerably.
>
There are still a lot of them out there and they can be most
inexpensive if the actual frequency isn't too important.

73 de n4jvp

# 1204. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-04 09:25:06 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <KtPQA9Gyl6vIFwhz@g3ohx.demon.co.uk>
Source record: 4641

In message <khptb4hqblcihdmq4igk9s64kcoc0cr5qo@4ax.com>, Registered User
<n4jvp@ix.netcom.com> writes
>On Wed, 3 Sep 2008 14:54:17 -0400, Michael Black <et472@ncf.ca> wrote:
>
>>On Wed, 3 Sep 2008, raypsi wrote:
>>
>>> Hey Gary,
>>>
>>> Rocks aren't cheap here: http://www.icmfg.com/thruhole_crystals.html
>>> Maybe in 9 land they pave the streets with gold.
>>> Personally I'd go with a programmable divider or PLL.
>>>
>>> Maybe you like retro, then I'd get some old rocks the ones
>>> you can take apart and grind them down to git's the freq's you need.
>>
>>And you can't grind them unless they are quite close to the desired
>>frequency. Grinding by hand will be too uneven, so the crystal will
>>stop working if you try to grind it more than a tiny bit.
>>
>My personal experience is an FT-243 crystal's frequency can be
>increased by several hundred kilohertz through grinding. A more
>abrasive media is needed for the slurry than scouring powder can
>provide. Permatex 34A valve grinding compound works FB. Most of my 80M
>rocks (26 between 3.5 & 3.6 MHz) were originally cut for 3237 kHz.
>Many of my 40M crystals were moved several hundred kHz as well.
>
>The key to grinding is not to try doing too much at once. Let the
>abrasive do the cutting, no downward pressure is need from the
>fingers..
>
>>It also relies on a big stock of crystals spread around so you can
>>find one sufficiently close enough, something that did seem possible
>>in the years after WWII, but after all this time attrition may have
>>reduced the stock considerably.
>>
>There are still a lot of them out there and they can be most
>inexpensive if the actual frequency isn't too important.
>
>73 de n4jvp

All this discussion about crystal grinding is very interesting. From my
far distant experiences, it is indeed a work of art and, more often, an
act of God. If the OP goes down that route, he may never actually get
his receiver built!

Looking at the websites of various manufacturers/suppliers (Google on "crystal+frequency" and similar), it looks like you should be able to get custom-made crystals in the required frequency range for less than $20 each. I'm sure that at least the 5MHz will be available off-the-shelf for less than $5 so we're talking maybe $100 for the six crystals.

The alternative is, as has been suggested, a frequency synthesizer. There are countless circuits available, but care should be taken to use one where the spectral purity of the output signal is adequate for use in a communications receiver. In particular, the phase noise has to be low. One approach would to be look for a kit with a good spec (and obviously something as simple as possible). A Google on "frequency+synthesizer+kit" and similar brings up lots of information.
--
Ian

## 1205. kpg-91d

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-04 13:14:29 UTC
From: blah <josh@haque.net>
Message-ID: <QaRvk.26513$_s1.9319@newsfe07.iad>
Source record: 4642

Looking for a serial number for the kenwood kpg-91d rss.

Josh

# 1206. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-04 15:50:26 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0809041144200.6417@darkstar.example.org>
Source record: 4643

On Thu, 4 Sep 2008, Ian Jackson wrote:

> In message <khptb4hqblcihdmq4igk9s64kcoc0cr5qo@4ax.com>, Registered User
> <n4jvp@ix.netcom.com> writes
>> On Wed, 3 Sep 2008 14:54:17 -0400, Michael Black <et472@ncf.ca> wrote:
>>
>>> On Wed, 3 Sep 2008, raypsi wrote:
>>>
>>>> Hey Gary,
>>>>
>>>> Rocks aren't cheap here: http://www.icmfg.com/thruhole_crystals.html
>>>> Maybe in 9 land they pave the streets with gold.
>>>> Personally I'd go with a programmable divider or PLL.
>>>>
>>>> Maybe you like retro, then I'd get some old rocks the ones
>>>> you can take apart and grind them down to git's the freq's you need.
>>>
>>> And you can't grind them unless they are quite close to the desired
>>> frequency. Grinding by hand will be too uneven, so the crystal will
>>> stop working if you try to grind it more than a tiny bit.
>>>
>> My personal experience is an FT-243 crystal's frequency can be
>> increased by several hundred kilohertz through grinding. A more
>> abrasive media is needed for the slurry than scouring powder can
>> provide. Permatex 34A valve grinding compound works FB. Most of my 80M
>> rocks (26 between 3.5 & 3.6 MHz) were originally cut for 3237 kHz.
>> Many of my 40M crystals were moved several hundred kHz as well.
>>
>> The key to grinding is not to try doing too much at once. Let the
>> abrasive do the cutting, no downward pressure is need from the
>> fingers..
>>
>>> It also relies on a big stock of crystals spread around so you can
>>> find one sufficiently close enough, something that did seem possible
>>> in the years after WWII, but after all this time attrition may have
>>> reduced the stock considerably.
>>>
>> There are still a lot of them out there and they can be most
>> inexpensive if the actual frequency isn't too important.
>>
>> 73 de n4jvp
>
> All this discussion about crystal grinding is very interesting. From my far
> distant experiences, it is indeed a work of art and, more often, an act of

> God. If the OP goes down that route, he may never actually get his receiver
> built!
>
> Looking at the websites of various manufacturers/suppliers (Google on
> "crystal+frequency" and similar), it looks like you should be able to get
> custom-made crystals in the required frequency range for less than $20 each.
> I'm sure that at least the 5MHz will be available off-the-shelf for less than
> $5 so we're talking maybe $100 for the six crystals.
>
> The alternative is, as has been suggested, a frequency synthesizer. There are
> countless circuits available, but care should be taken to use one where the
> spectral purity of the output signal is adequate for use in a communications
> receiver. In particular, the phase noise has to be low. One approach would to
> be look for a kit with a good spec (and obviously something as simple as
> possible). A Google on "frequency+synthesizer+kit" and similar brings up lots
> of information.

A hundred dollars can be quite a bit, likely the rest of the parts aren't
that much (unless someone is buying all new parts).

The thing about a synthesizer is that the original poster only needs
well spaced frequencies, so the reference frequency can be 500KHz, which
allows for much easier filtering than narrower channels (or, the early
synthesizers in the seventies that replaced 8MHz crystals in 2M FM rigs,
not only did they have to deal with close together channel spacing
of 10 or 15KHz, but since the synthesizer output would be multiplied
up by the transmitter, the reference frequency was the channel spacing
divided by how much the transmitter multiplied, which gave a terribly
low reference frequency.

Plus, these are for changing bands, not tuning a given band. A second
or so of lockup time isn't a problem since changing bands won't happen
often. So the filtering can be better without impacting on tuning. A
main tuning synthesizer with 1KHz steps starts out more complicated
because it's 1KHz steps, but then it has to change frequency rapidly,
which makes it even more trouble to design well.

Michael VE2BVW

# 1207. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-04 20:47:58 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <4QXvk.28730$Fr1.7747@newsfe03.iad>
Source record: 4644

What ever happened to that neat list of surplus crystals that JAN
in Fort Myers used to offer? Those were the good old days.

A few of those crystals are available on the Surplus Sales of
Nebraska website. I find two rocks I needed (1.515 kHz for
2nd conversion from 1.6 MHz to 85 kHz) there after searching
for several weeks.

Pete

## 1208. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-04 21:06:11 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <95Yvk.33399$9u1.16625@newsfe09.iad>
Source record: 4645

"Tio Pedro" <radioconnection@cox.net> wrote in message .

>I find two rocks I needed >

I found two rocks...( Edit..) :)

## 1209. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-05 01:11:33 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <7509c4db-2511-45f2-a4ee-f3a9e1801742@26g2000hsk.googlegroups.com>
Source record: 4646

On Sep 3, 2:54 pm, Michael Black <et...@ncf.ca> wrote:
> On Wed, 3 Sep 2008, raypsi wrote:
> > Hey Gary,
>
> > Rocks aren't cheap here:http://www.icmfg.com/thruhole_crystals.html
> > Maybe in 9 land they pave the streets with gold.
> > Personally I'd go with a programmable divider or PLL.
>
> > Maybe you like retro, then I'd get some old rocks the ones
> > you can take apart and grind them down to git's the freq's you need.
>
> And you can't grind them unless they are quite close to the desired
> frequency.  Grinding by hand will be too uneven, so the crystal will
> stop working if you try to grind it more than a tiny bit.
>
> It also relies on a big stock of crystals spread around so you can
> find one sufficiently close enough, something that did seem possible
> in the years after WWII, but after all this time attrition may have
> reduced the stock considerably.
>
> And realistically, they also have to be bulky FT-243 holders, since
> those you can open by removing screws, and the blank is held in place
> with pressure.  More recent holder types require desoldering the case,
> and figuring out how to remove the blank and then get it back in place
> when it's soldered in place (or something like that I can't remember how
> the blank is connected).
>
> One of the odd things is that if one has to buy new crystals, a
> synthesizer will likely be far cheaper.  In the early seventies,
> synthesizers made a big splash because everyone wanted lots of channels
> on 2m FM, and the need to have them ground to frequency (and to equipment)
> made it all very costly, so synthesizers despite their cost and bulk
> became the norm.
>
> Almost forty years later, a synthesizer for a handful of crystals would
> still be comparatively bulky, but would be even cheaper than in the early
> seventies.
>
>     Michael  VE2BVW

Believe it or not I was making a living sell rocks HI HI back forty
years ago.
It was like there was a freaking crystal company on every corner.
There was so

much competition back then the prices was chump change. The crystal companies
could have put the big hurt on PLL or programmable dividers. I know the real
reason crystals took a back seat, and it;s not what anybody thinks happened.

73 OM

n8zu

# 1210. Re: Sending power into rig unused for 30 years : Precautions ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-05 11:34:34 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <48c11941$1@clear.net.nz>
Source record: 4647

Andrew VK3BFA wrote:

> On Aug 16, 4:03 pm, dpl...@radagast.org (Dave Platt) wrote:
>
>>>Now retired I'm trying to become active again.
>>>My TS-520S has not been on for 30 years.
>>>I don't have a variactor ( variable transformer ).
>>
>
> KISS. Wire a 60w light globe in series, turn it on, let it sit for a
> few hours. Filaments OFF for this test.
>
> Havent used a variac for this for years - reason - its the switch on
> current surge thats going to kill old electros, and the variac has no
> current limiting whereas the light bulb does. You will see a brief
> "Flash" as the caps charge up, then maybe a dull glow, eventually, no
> light at all.
>
> Given that the caps used were / are modern, and of good quality to
> start with, the KISS method works well.
>
> Oh, BTW - when all this is done, apply full mains power, let the tube
> filaments soak for a few hours lest they have gone gassy.
>
> Andrew VK3BFA.

Well I still use a kenwood 820s and it goes fine. In fact I'm just putting the WARC bands into it.
The only parts I would be really concerned about are the 450 vot electros in series acroos the 800 volt final ht supply. If you were very careful a good look at the caps smoothing the 300 volt screen and driver plate supply might also be a good idea. If you do a search on google you will find all the tech data you might need including circuits and manuals.
It's a pretty good rig except for some poor final tank design on some bands. a rewind of the Pi network inductor can help a lot and the use of the proper values for a working Q of 12.
This can give you up to 25 or 30 watts more output on some bands with no more DC input. It also saves you finals a lot of potential grief. See the QST 1983 upgrade article for a few ideas.
Cliff Wright ZL1BDA ex G3NIA

# 1211. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-05 15:11:08 UTC
From: JB <nospam@goofball.net>
Message-ID: <g_bwk.563$1a2.176@trnddc04>
Source record: 4648

Believe it or not I was making a living sell rocks HI HI back forty
years ago.
It was like there was a freaking crystal company on every corner.
There was so
much competition back then the prices was chump change. The crystal
companies
could have put the big hurt on PLL or programmable dividers. I know
the real
reason crystals took a back seat, and it;s not what anybody thinks
happened.

73 OM

n8zu

It would be my guess to do away with technicians that tune up radios and fix
things.

# 1212. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 12:52:44 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <E2vwk.21259$3A4.20973@newsfe04.iad>
Source record: 4649

"JB" <nospam@goofball.net> wrote in message
news:g_bwk.563$1a2.176@trnddc04...
> The crystal
> companies
> could have put the big hurt on PLL or programmable dividers. I know
> the real
> reason crystals took a back seat, and it;s not what anybody thinks
> happened.
>
> 73 OM
>
> n8zu
>
> It would be my guess to do away with technicians that tune up radios and
> fix
> things.
>
>
I've been racking my brain trying to figure out a reason.
But, I think you hit the nail on the head. It fits right in
with the obsolescence of the FCC 1st and 2nd Class
Radiotelephone tickets.

Pete

## 1213. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 14:05:46 UTC
From: JB <nospam@goofball.net>
Message-ID: <_6wwk.729$393.65@trnddc05>
Source record: 4551

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:isednRHGZahIFV_VnZ2dnUVZ_qzinZ2d@earthlink.com...
>
> "Tio Pedro" <radioconnection@cox.net> wrote in message
> news:E2vwk.21259$3A4.20973@newsfe04.iad...
> >>
> > I've been racking my brain trying to figure out a reason.
> > But, I think you hit the nail on the head. It fits right in
> > with the obsolescence of the FCC 1st and 2nd Class
> > Radiotelephone tickets.
> >
> > Pete
>
> They may as well have done away with the FCC tickets. I passed the 1st
> class test at 22 years of age in 1972 on the first try for the ticket. I
> had never seen a TV transmitter, but had the ticket to work on them.
Maybe
> years ago it was differant and a harder test.
> Thought I wanted to get into the 2 way repair business, but never did.
When
> I took the test it was only one dollar more for the first class, so took
it
> and passed
> Most of the tests are made so any idiot can pass them.
>

*Mamas don't let your babies grow up to be radio techs.*

I did the Advanced Ham ticket, then 2nd phone when I was 17 and got sucked
into MNSO immediately.

Nobody cares about the FCC tickets but the Gov't. The private industry
actually holds it against you because you have rules and they don't.
And I'm worn out from always being threatened by people with guns and billy
clubs who's first instinct is to smash something if it seems uncooperative.
Then there's the hams "bless their hearts" who put me out of business by
doing free work. Retirement is sweet but I'm dirt poor.

# 1214. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 14:43:47 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <isednRHGZahIFV_VnZ2dnUVZ_qzinZ2d@earthlink.com>
Source record: 4650

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:E2vwk.21259$3A4.20973@newsfe04.iad...
>>
> I've been racking my brain trying to figure out a reason.
> But, I think you hit the nail on the head. It fits right in
> with the obsolescence of the FCC 1st and 2nd Class
> Radiotelephone tickets.
>
> Pete

They may as well have done away with the FCC tickets. I passed the 1st class test at 22 years of age in 1972 on the first try for the ticket. I had never seen a TV transmitter, but had the ticket to work on them. Maybe years ago it was differant and a harder test.
Thought I wanted to get into the 2 way repair business, but never did. When I took the test it was only one dollar more for the first class, so took it and passed.
Most of the tests are made so any idiot can pass them.

## 1215. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 15:16:50 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <K9xwk.43335$4s1.20862@newsfe06.iad>
Source record: 4553

```
"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:b-WdnQ3Aha3SBl_VnZ2dnUVZ_v3inZ2d@earthlink.com...
>
> "JB" <nospam@goofball.net> wrote in message
> news:_6wwk.729$393.65@trnddc05...
>>
>> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
>> news:isednRHGZahIFV_VnZ2dnUVZ_qzinZ2d@earthlink.com...
>>>
>>> "Tio Pedro" <radioconnection@cox.net> wrote in message
>>> news:E2vwk.21259$3A4.20973@newsfe04.iad...
>>
>> Nobody cares about the FCC tickets but the Gov't. The private industry
>> actually holds it against you because you have rules and they don't.
>> And I'm worn out from always being threatened by people with guns and
>> billy
>> clubs who's first instinct is to smash something if it seems
>> uncooperative.
>> Then there's the hams "bless their hearts" who put me out of business by
>> doing free work. Retirement is sweet but I'm dirt poor.
>>
>>
> That is why I did not go into the radio business. Friend told me of a job
> opening. I was making about $ 2 an hour more at the time and had a good
> retirement package.
> The job I was doing did not require any special license or anything.
> Working for a large company as an electrician/instrument technician.
> Did not have to have an electrical license as large companies don't
> require it and neither does the government.
>

I got my FCC 1st in high school after working tobacco for one
summer. The remainder of my summer vacations were spent
tending AM/FM/TV transmitter sites as summer replacement.
Paid was good for a kid, and I didn't get dirty :) One of my first
interim "career" jobs was a field tech for RCA/Univac mainframe
systems. I'm not sure which career (broadcasting or mainframe
computer) careers faded into oblivion first. Both are rght up
there with coal delivery techicians and icemen.

Pete
>
```

# 1216. Looking for AMI Switched Capacitor Filter IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 15:33:05 UTC
From: "B. Newberger" <barry.newberger@amd.com>
Message-ID: <20080906-153305.851.0@B.xNewberger.aioe.cjb.net>
Source record: 4554

Need an AMI S3529 switched-capacitor HP filter. The S3529
and the S3528 LP counterpart were featured in an April '86 QST article
entitled SuperSCAF and Son. I still have the S3528, but seem to have
misplaced the S3529.

TIA,

Barry Newberger
w5kh@arrl.net

# 1217. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 15:59:17 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <G-udnSMpqPlLNV_VnZ2dnUVZ_r_inZ2d@bright.net>
Source record: 4555

Tio Pedro wrote:
One of my first
> interim "career" jobs was a field tech for RCA/Univac mainframe
> systems. I'm not sure which career (broadcasting or mainframe
> computer) careers faded into oblivion first. Both are rght up
> there with coal delivery techicians and icemen.
>
> Pete
>
>
>
Damn! I just got my degree in coal delivery. I guess I always am a day late and a dollar short! ;) Guess I'll have to keep my day job (radio tech...VHF up through 7 GHz)

Scott
N0EDV

# 1218. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 16:02:23 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <b-WdnQ3Aha3SBl_VnZ2dnUVZ_v3inZ2d@earthlink.com>
Source record: 4552

"JB" <nospam@goofball.net> wrote in message
news:_6wwk.729$393.65@trnddc05...
>
> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
> news:isednRHGZahIFV_VnZ2dnUVZ_qzinZ2d@earthlink.com...
>>
>> "Tio Pedro" <radioconnection@cox.net> wrote in message
>> news:E2vwk.21259$3A4.20973@newsfe04.iad...
>
> Nobody cares about the FCC tickets but the Gov't. The private industry
> actually holds it against you because you have rules and they don't.
> And I'm worn out from always being threatened by people with guns and
> billy
> clubs who's first instinct is to smash something if it seems
> uncooperative.
> Then there's the hams "bless their hearts" who put me out of business by
> doing free work. Retirement is sweet but I'm dirt poor.
>
>
That is why I did not go into the radio business. Friend told me of a job
opening. I was making about $ 2 an hour more at the time and had a good
retirement package.
The job I was doing did not require any special license or anything.
Working for a large company as an electrician/instrument technician.
Did not have to have an electrical license as large companies don't require
it and neither does the government.

# 1219. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 19:18:54 UTC
From: jimmie68@gmail.com
Message-ID: <4271c502-6b97-4b18-8d70-b5e05372cbc7@p25g2000hsf.googlegroups.com>
Source record: 4556

On Sep 1, 9:57 pm, jimmi...@gmail.com wrote:
> On Sep 1, 7:48 pm, raypsi <RBorow...@gmail.com> wrote:
>
>
>
>
>
> > On Aug 28, 8:39 pm, jimmi...@gmail.com wrote:
>
> > > On Aug 28, 4:02 pm, jimmi...@gmail.com wrote:
>
> > > > On Aug 27, 12:40 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > > > finally came across an article by VK3HZ that describes how to make a
> > > > > microwave oven inverter PS work, as a stand alone supply.
> > > > > the link is:www.users.bigpond.net.au/dwsmith/hv_inverter.pdf
>
> > > > > It's only regulated from the primary side. And you can make it put out
> > > > > anything from 2000 to 4000 VDC. but at 1300 watts.
>
> > > > > So all I have to do is load down the primary to fake out the regulator
> > > > > into seeing 1300 watts, Or run class A.
>
> > > > > The output or the input still has to be filtered
>
> > > > > There's an opto coupler that has to see a 110hz square wave, according
> > > > > to VK3HZ, that'll keep the supply running full tilt as long as there
> > > > > is power supplied to the inverter.
>
> > > > > 73
> > > > > n8zu
>
> > > > If the circuit can be driven from 555 osc perhaps the pulse width can
> > > > be controlled from a feedback voltage taken off the output of the
> > > > power supply.
> > > > I am thinking adding a small winding to the transformer rectifying and
> > > > filtering it and supplying this back to control the pulse width of
> > > > your osc.
>
> > > > JImmie- Hide quoted text -
>
> > > > - Show quoted text -
>
> > > I was the OP of the origonal thread about the inverter power supplies.

> > > I was actually more interested in learning about the design of the
> > > power supplies so I could possibly build one from scratch. With the
> > > right information this may be easier to do than to modify one from a
> > > microwave oven. I am very grateful for the information. I have a
> > > couple of the Panasonic power supplies unfortunately they dont work
> > > but maybe I can repair them now that I have a schematic. Information
> > > on the transformer would be a good thing to have as I am sure it could
> > > be optimized for the desired output voltage and current needed for an
> > > amateur amplifier.
>
> > > With the current transformer on the front end I am guessing this may
> > > be the feedback path for regulation. That is to say the power supply
> > > is being controlled by the amount of current that is being drawn on
> > > the input side of the power supply. If this is the case maybe this
> > > input can be taken of the out put of the power supply and then the
> > > supply could be voltage regulated instead of being power regulated.
>
> > > Jimmie- Hide quoted text -
>
> > > - Show quoted text -
>
> > Hey Jimmie
>
> > I suppose  that you could use the duty cycle feature of this supply to
> > control the output
> > but I'd need a bank of 450WVDC caps to supply filtering.
> > So say the power of the amp drops: the supply will compensate by
> > increasing the voltage.
>
> .
>
> > But with feedback I could drop the duty cycle thru the opto coupled
> > input. Thus causing a drop in voltage which the filter would handle.
> > By running the inverter at another lower duty cycle I can control the
> > output voltage.
>
> > I would suggest at least a bank of 16, 450WVDC for a little head room.
> > Plus that would take out the 120 cycle ripple.
>
> > 73
>
> > n8zu- Hide quoted text -
>
> > - Show quoted text -
>
> Thats pretty much my idea.
> In radars something very similar to develop 6KV to charge the PFN. If
> you could analyze the circuit where the current sample is picked off
> the AC mains that would tell us a lot about what would be needed to
> develop the proper feedback signal off of the switching transformer.

> Unfortunately I am without power supply at the moment. Well I have one
> but my wife has forbid me to touch it. That is her primary cooking
> device As Dave idicated the rectifiers for the output of the pwer
> supply are configured as a doubler and it could be configured as a
> bridge if you wanted lower voltage. I am thinking maybe( a lot of
> supposig here) this thing may be configured from 1500 to nearly 5kv by
> using a combination af feedback adjustment and rectifier
> configuration.
>
> I agree with about the caps,
>
> I emailed Dave and he pretty much agrees with my idea at least in
> theory but he has dropped the project at least for now.
>
> didnt you say you had a source for these power supplies.
>
> Anyone who gets this to work would surely have some serious ham radio
> bragging rights.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

I have found some better schematics on the inverter. It looks like
modifying the power supply for amateur QRO is very plausable. Where
could I post them so anyone who wanted them would have access?

Jimme

## 1220. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 19:54:11 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <rYadnS7EBOI1QI_VnZ2dnUVZ8j-dnZ2d@pipex.net>
Source record: 4557

JB wrote:
snip
> Then there's the hams "bless their hearts" who put me out of business by
> doing free work. Retirement is sweet but I'm dirt poor.
==========
Hams are radio AMATEURS so it is logical that they do work for free,
since they are involved in a hobby.

Frank GM0CSZ / KN6WH

## 1221. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 22:01:48 UTC
From: JB <nospam@goofball.net>
Message-ID: <g5Dwk.762$393.740@trnddc05>
Source record: 4558

"Highland Ham" <rfburns@allbands.net> wrote in message
news:rYadnS7EBOl1Ql_VnZ2dnUVZ8j-dnZ2d@pipex.net...
> JB wrote:
> snip
> > Then there's the hams "bless their hearts" who put me out of business by
> > doing free work. Retirement is sweet but I'm dirt poor.
> ==========
> Hams are radio AMATEURS so it is logical that they do work for free,
> since they are involved in a hobby.
>
> Frank GM0CSZ / KN6WH

That's why they have to learn to seperate their hobby from the pecuniary interests of others. So they don't become a target for commercial interests.

If some one or group should be buying or renting radios or systems because their entity has regular need for radio dispatch or communications of a non-hobby nature, they should seek professional help while it exists rather than exploiting the ham.

Of course if we all join the Communist Party and the government volunteers to provide us with free food, housing, clothing, medical and other basic subsistence needs, we should do whatever they want after we finish our compulsory rice picking for the day.

## 1222. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 22:52:39 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <3RDwk.35000$_s1.2139@newsfe07.iad>
Source record: 4559

"JB" <nospam@goofball.net> wrote in message news:g5Dwk.762
>
> That's why they have to learn to seperate their hobby from the pecuniary
> interests of others. So they don't become a target for commercial
> interests.
>
> If some one or group should be buying or renting radios or systems because
> their entity has regular need for radio dispatch or communications of a
> non-hobby nature, they should seek professional help while it exists
> rather
> than exploiting the ham.
>
> Of course if we all join the Communist Party and the government volunteers
> to provide us with free food, housing, clothing, medical and other basic
> subsistence needs, we should do whatever they want after we finish our
> compulsory rice picking for the day.
>
>
It was the same in broadcasting. There was always a person
willing to DJ for free, just for the fun of it, at the smaller
stations. Folks who were trying to make a meager living
behind the mikes were at the mercy of hobbyists.

# 1223. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 23:38:02 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <5f28f00d-8c15-499a-8bd2-cd053797d17a@73g2000hsx.googlegroups.com>
Source record: 4560

On Sep 4, 9:11 pm, raypsi <RBorow...@gmail.com> wrote:
> On Sep 3, 2:54 pm, Michael Black <et...@ncf.ca> wrote:
>
>
>
> > On Wed, 3 Sep 2008, raypsi wrote:
> > > Hey Gary,
>
> > > Rocks aren't cheap here:http://www.icmfg.com/thruhole_crystals.html
> > > Maybe in 9 land they pave the streets with gold.
> > > Personally I'd go with a programmable divider or PLL.
>
> > > Maybe you like retro, then I'd get some old rocks the ones
> > > you can take apart and grind them down to git's the freq's you need.
>
> > And you can't grind them unless they are quite close to the desired
> > frequency. Grinding by hand will be too uneven, so the crystal will
> > stop working if you try to grind it more than a tiny bit.
>
> > It also relies on a big stock of crystals spread around so you can
> > find one sufficiently close enough, something that did seem possible
> > in the years after WWII, but after all this time attrition may have
> > reduced the stock considerably.
>
> > And realistically, they also have to be bulky FT-243 holders, since
> > those you can open by removing screws, and the blank is held in place
> > with pressure. More recent holder types require desoldering the case,
> > and figuring out how to remove the blank and then get it back in place
> > when it's soldered in place (or something like that I can't remember how
> > the blank is connected).
>
> > One of the odd things is that if one has to buy new crystals, a
> > synthesizer will likely be far cheaper. In the early seventies,
> > synthesizers made a big splash because everyone wanted lots of channels
> > on 2m FM, and the need to have them ground to frequency (and to equipment)
> > made it all very costly, so synthesizers despite their cost and bulk
> > became the norm.
>
> > Almost forty years later, a synthesizer for a handful of crystals would
> > still be comparatively bulky, but would be even cheaper than in the early
> > seventies.
>
> > Michael VE2BVW
>

> Believe it or not I was making a living sell rocks HI HI back forty
> years ago.
> It was like there was a freaking crystal company on every corner.
> There was so
> much competition back then the prices was chump change. The crystal
> companies
> could have put the big hurt on PLL or programmable dividers. I know
> the real
> reason crystals took a back seat, and it;s not what anybody thinks
> happened.
>
> 73 OM
>
> n8zu

You don't see any newbies on here making any rock controlled hets..
It's like vinyl records or CD's
they is all gone. They don't want you to know about crystals there is
to much
power in that knowledge. They want everyone dumbed down so they can be
controlled,
that's why they did away with code, nobody will ever know it ever
existed in 5 years time.

73
n8zu

# 1224. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-06 23:57:32 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <54d91d17-c2ae-4b0d-b999-8073e161e460@79g2000hsk.googlegroups.com>
Source record: 4561

On Sep 6, 3:18 pm, jimmi...@gmail.com wrote:
> On Sep 1, 9:57 pm, jimmi...@gmail.com wrote:
>
>
>
> > On Sep 1, 7:48 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > On Aug 28, 8:39 pm, jimmi...@gmail.com wrote:
>
> > > > On Aug 28, 4:02 pm, jimmi...@gmail.com wrote:
>
> > > > > On Aug 27, 12:40 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > > > > finally came across an article by VK3HZ that describes how to make a
> > > > > > microwave oven inverter PS work, as a stand alone supply.
> > > > > > the link is:www.users.bigpond.net.au/dwsmith/hv_inverter.pdf
>
> > > > > > It's only regulated from the primary side. And you can make it put out
> > > > > > anything from 2000 to 4000 VDC. but at 1300 watts.
>
> > > > > > So all I have to do is load down the primary to fake out the regulator
> > > > > > into seeing 1300 watts, Or run class A.
>
> > > > > > The output or the input still has to be filtered
>
> > > > > > There's an opto coupler that has to see a 110hz square wave, according
> > > > > > to VK3HZ, that'll keep the supply running full tilt as long as there
> > > > > > is power supplied to the inverter.
>
> > > > > > 73
> > > > > > n8zu
>
> > > > > If the circuit can be driven from 555 osc perhaps the pulse width can
> > > > > be controlled from a feedback voltage taken off the output of the
> > > > > power supply.
> > > > > I am thinking adding a small winding to the transformer rectifying and
> > > > > filtering it and supplying this back to control the pulse width of
> > > > > your osc.
>
> > > > > JImmie- Hide quoted text -
>
> > > > > - Show quoted text -
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> > > I was the OP of the origonal thread about the inverter power supplies.

> > > > I was actually more interested in learning about the design of the
> > > > power supplies so I could possibly build one from scratch. With the
> > > > right information this may be easier to do than to modify one from a
> > > > microwave oven. I am very grateful for the information. I have a
> > > > couple of the Panasonic power supplies unfortunately they dont work
> > > > but maybe I can repair them now that I have a schematic. Information
> > > > on the transformer would be a good thing to have as I am sure it could
> > > > be optimized for the desired output voltage and current needed for an
> > > > amateur amplifier.
>
> > > > With the current transformer on the front end I am guessing this may
> > > > be the feedback path for regulation. That is to say the power supply
> > > > is being controlled by the amount of current that is being drawn on
> > > > the input side of the power supply. If this is the case maybe this
> > > > input can be taken of the out put of the power supply and then the
> > > > supply could be voltage regulated instead of being power regulated.
>
> > > > Jimmie- Hide quoted text -
>
> > > > - Show quoted text -
>
> > > Hey Jimmie
>
> > > I suppose that you could use the duty cycle feature of this supply to
> > > control the output
> > > but I'd need a bank of 450WVDC caps to supply filtering.
> > > So say the power of the amp drops: the supply will compensate by
> > > increasing the voltage.
>
> > .
>
> > > But with feedback I could drop the duty cycle thru the opto coupled
> > > input. Thus causing a drop in voltage which the filter would handle.
> > > By running the inverter at another lower duty cycle I can control the
> > > output voltage.
>
> > > I would suggest at least a bank of 16, 450WVDC for a little head room.
> > > Plus that would take out the 120 cycle ripple.
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> > configuration.
>
> > I agree with about the caps,
>
> > I emailed Dave and he pretty much agrees with my idea at least in
> > theory but he has dropped the project at least for now.
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> > didnt you say you had a source for these power supplies.
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> > Anyone who gets this to work would surely have some serious ham radio
> > bragging rights.
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> > Jimmie- Hide quoted text -
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>
> I have found some better schematics on the inverter. It looks like
> modifying the power supply for amateur QRO is very plausable. Where
> could I post them so anyone who wanted them would have access?
>
> Jimme

Do you have windows movie maker you could put it on youtube.com if
there in some
pix file extension like jgp or gif. I had a single pix that I put in
movie maker with intro caption.
Then downloaded it to youtube. A 15 sec single frame video with intro
caption.

Thanks for bringing it up, that jarred my grey matter. I can post a
video to you tube
Now to figure out how to get that power supply to copy on my scanner.

73
n8zu

# 1225. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 00:31:58 UTC
From: N2EY@aol.com
Message-ID: <9e68e647-6f92-4eea-b160-4604766dbe30@c65g2000hsa.googlegroups.com>
Source record: 4562

On Sep 2, 4:12 pm, Gary@ removenospamandputkf9cm.com wrote:
> I am looking for some Heterodyne conversion crystals for a receiver I am
> making.
> The frequencies are: 5 MHz, 7 MHz, 10.5 MHz, 13.5 MHz, 17.5 MHz and 21.5
> MHz.
> The variable mixing frequency will be from 3 to 3.5 MHz. I would prefer all
> the same type holder.

Once source of crystals is eBay. Another is AF4K (google his call), he has quite a stock in various holders.

But be prepared to pay more than a few dollars per crystal!

Actually, when you adjust for inflation, crystals cost about as much now as they did 30-40 years ago. Three dollars back in 1965 is the equivalent of about twenty dollars today.

You can also do things like use harmonics and overtones of the crystals to get the higher frequencies.

--

But before you start building, I suggest you reconsider that mixing scheme.

As I understand it, the receiver will consist of a tunable section that covers 3 to 3.5 MHz, and a converter section which converts the various ham bands to that tuning range.

So for 160, you would take the 2 to 1.5 MHz range, subtract it from 5 MHz, and get 3 to 3.5 MHz

For 80, you would take the 4 to 3.5 MHz range, subtract it from 7 MHz, and get 3 to 3.5 MHz

For 40, you would take the 7.5 to 7 MHz range, subtract it from 10.5 MHz, and get 3 to 3.5 MHz

For 30, you would take the 10.5 to 10.0 MHz range, subtract it from 13.5 MHz, and get 3 to 3.5 MHz

For 20, you would take the 14.5 to 14 MHz range, subtract it from 17.5 MHz, and get 3 to 3.5 MHz

For 17, you would take the 18.5 to 18 MHz range, subtract it from 21.5 MHz, and get 3 to 3.5 MHz

I guess you don't plan on 15, 12 or 10 meters.

The main problem I see with this design is on 80 meters. On that band, the tunable frequency is too close to the band being covered, and you'll likely have troubles with feedthrough. For example, when you are trying to listen to a signal on, say, 3.6 MHz, the tunable section will be on 3.4 MHz, and the front-end selectivity probably won't be able to stop strong signals from leaking through.

I suggest you look at other heterodyne schemes, because 80 meter operation will be compromised using the scheme you describe.

Here's one to consider, from G2DAF:

Tunable range is 5 to 5.5 MHz

For 160, you would take the 2 to 1.5 MHz range, subtract it from 7 MHz, and get 5 to 5.5 MHz

For 80, you would take the 4 to 3.5 MHz range, subtract it from 9 MHz, and get 5 to 5.5 MHz

For 40, you would take the 7.5 to 7 MHz range, subtract it from 12.5 MHz, and get 5 to 5.5 MHz

For 30, you would take the 10.5 to 10.0 MHz range, subtract it from 15.5 MHz, and get 5 to 5.5 MHz

For 20, you would take the 14 to 14.5 MHz range, subtract 9 MHz from it, and get 5 to 5.5 MHz (Note that the 9 MHz xtal works on two bands)

For 17, you would take the 18 to 18.5 MHz range, subtract 13 MHz from it, and get 5 to 5.5 MHz

For 15, you would take the 21 to 21.5 MHz range, subtract 16 MHz from it, and get 5 to 5.5 MHz

For 12, you would take the 24.5 to 25 MHz range, subtract 19.5 MHz from it, and get 5 to 5.5 MHz

So you cover 8 ranges below 25 MHz with 7 xtals

Ten meters is left as an exercise for the reader.

For the higher frequencies, harmonics of the can be used. For example, an 8 MHz xtal could be used for 15 meters by doubling.

Here's another one:

Tunable range is 3.5 to 4.1 MHz

For 160, you would take the 2 to 1.4 MHz range, subtract it from 5.5 MHz, and get 3.5 to 4.1 MHz

For 80, the conversion section is bypassed and you use the basic tuning range

For 40, you would take the 7.5 to 6.9 MHz range, subtract it from 11 MHz, and get 3.5 to 4.1 MHz (Note that the second harmonic of the 5.5

MHz xtal used for 160 is 11 MHz)

For 30, you would take the 10.6 to 10.0 MHz range, subtract it from 14.1 MHz, and get 3.5 to 4.1 MHz

For 20, you would take the 14 to 14.6 MHz range, subtract 10.5 MHz from it, and get 3.5 to 4.1 MHz

For 17, you would take the 17.6 to 18.2 MHz range, subtract 14.1 MHz from it, and get 3.5 to 4.1 MHz (Note that the same xtal that gives you 30 meters also works on 17 meters)

For 15, you would take the 21 to 21.6 MHz range, subtract 17.5 MHz from it, and get 3.5 to 4.1 MHz

For 12, you would take the 24.5 to 25.1 MHz range, subtract 21 MHz from it, and get 3.5 to 4.1 MHz (Note that the second harmonic of the 10.5 MHz xtal used for 20 is 21 MHz)

So you cover cover 8 ranges below 25.1 MHz with 6 xtals. If you use harmonics of certain xtals, those 8 ranges can be covered with just 4 xtals.

Ten meters is left as an exercise for the reader.

There are lots of other schemes.

73 de Jim, N2EY

# 1226. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 00:50:54 UTC
From: N2EY@aol.com
Message-ID: <7e57e9dd-c9b4-48d2-9794-88649499944a@79g2000hsk.googlegroups.com>
Source record: 4563

The real reason for the popularity of synthesizers is cost. When you need a new rock for every band they get costly, but a synthesizer doesn't. This wasn't practical until chips that could do most of the work became cheap.

The main reason for eliminating the commercial operator licenses was cost too. Here's what happened:

There was a time, not so long ago, when there were a large number of tasks that could only be performed (legally, anyway) by a person with an FCC Commercial Operator license. No others need apply, regardless of experience, education or background. Either you were a Radio Operator of a certain class, or you weren't.

Those licenses meant that a person with a high-school education and some smarts could have a good middle-class income if they had the license. Not that all the jobs were easy, or that you didn't need a certain amount of knowledge to do them, but that the Commercial license became the equivalent of a union card, and the jobs were, in a way, protected by FCC regulations.

In other words, the Commercial licenses protected a craft known as Radio Operators, with a set of skills and knowledge specific to them, and jobs only they could do.

The masters of industry didn't like that, so they prevailed on the FCC to reduce the requirements and eliminate most of the licenses and the requirements for tasks to be done only by Radio Operators. The jobs went with them.

This is also why the maritime services went to satellite-based comms rather than HF and MF radio and Morse Code - it eliminated the need for ships to carry licensed Radio Operators.

Oddly enough, FCC still issues Commercial RadioTelegraph licenses, both First and Second Class, though I don't know where in the USA you can get the required experience for a First Class.

73 de Jim, N2EY

# 1227. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 01:03:52 UTC
From: N2EY@aol.com
Message-ID: <b501530b-5ccb-4b87-adcd-af52ea907870@z66g2000hsc.googlegroups.com>
Source record: 4564

On Sep 6, 7:38 pm, raypsi <RBorow...@gmail.com> wrote:

> They want everyone dumbed down so they can be
> controlled,
> that's why they did away with code, nobody will ever know it ever
> existed in 5 years time.

They didn't do away with Morse Code. They did away with the test for it. It was done a little at a time over the past 30 years.

My personal theory on why it was eliminated is this:

Since the early 1980s, the FCC has been required to do more and more stuff with less and less resources. So they have constantly sought out ways to reduce their workload, particularly for radio services that don't bring in $$, like ham radio.

That's why they turned over the job of amateur license testing to the QPC and VECs back in 1983 or so. Instead of paid FCC employees making up and conducting amateur license tests, unpaid volunteers do almost all the work. It's also why they doubled the license term to 10 years about that same time - reduces the number of renewals by half.

Reducing the number of license classes reduces the number of tests and the number of upgrade applications to process. In the old days when there were six license classes, a ham who went from Novice or Tech to Extra could upgrade as many as four times. Now there are only two steps.

Eliminating the Morse Code test means one less license test. Less work.

But even though the last remnants of the Morse Code test were removed back in February 2007, there are still plenty of hams using it on the air. This past Field Day, for example, the group I went with had one Morse Code station and three voice stations, all similarly equipped. There were three Morse Code operators and far more voice ops, yet the Morse Code station made more QSOs than all the voice stations combined. This wasn't a surprise, either.

73 de Jim, N2EY

# 1228. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 05:41:07 UTC
From: jimmie68@gmail.com
Message-ID: <5ef32184-3d62-41f1-ad11-ad1ce95501a8@l42g2000hsc.googlegroups.com>
Source record: 4565

On Sep 6, 7:57 pm, raypsi <RBorow...@gmail.com> wrote:
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>
>
>
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>
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> > modifying the power supply for amateur QRO is very plausable. Where
> > could I post them so anyone who wanted them would have access?
>
> > Jimme
>
> Do you have windows movie maker you could put it on youtube.com if
> there in some
> pix file extension like jgp or gif. I had a single pix that I put in
> movie maker with intro caption.
> Then downloaded it to youtube. A 15 sec single frame video with intro
> caption.
>
> Thanks for bringing it up, that jarred my grey matter. I can post a
> video to you tube
> Now to figure out how to get that power supply to copy on my scanner.
>
> 73
> n8zu- Hide quoted text -
>
> - Show quoted text -

I guess you downloaded David Smiths diagram. Mine has much more detail.
Give me an email address and I will get it to you. David Smiths address in the article is good and he wants a dialog with anyone interested in this project.
I think the 3 of us need to get together and compare notes and draw in as many other people into this project as we can. I have about given up on finding another microwave at the thrift store that uses an inverter. I guess I will just bite the bulllet and buy one. I have a few experiments I want to do.

Jimmie

# 1229. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 05:52:26 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <xcSdnWqxlJtW917VnZ2dnUVZ_tjinZ2d@posted.cpinternet>
Source record: 4566

jimmie68@gmail.com wrote:

<snip>
> I have found some better schematics on the inverter. It looks like
> modifying the power supply for amateur QRO is very plausable. Where
> could I post them so anyone who wanted them would have access?

Please email me at 'msg _at_ cybertheque _dot_ org; I'd be happy
to put any data you have into a web page. I have been pondering
building a HV SMPS for years based on PC PSU parts and have
been following threads in this N.G. on the oven PSU with interest.

Michael

# 1230. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 06:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1220767501@panix.com>
Source record: 4567
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

## 1231. [redacted] INTERNATIONAL HOTELS[redacted]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 14:05:07 UTC
From: roseeehh@gmail.com
Message-ID: <0139e479-05c0-48d5-b774-78172f7857f0@w24g2000prd.googlegroups.com>
Source record: 4568

[redacted] INTERNATIONAL HOTELS[redacted]

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http://internationalhotelsdetail.blogspot.com

# 1232. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 16:51:40 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <d135b264-b868-4027-9658-15ec1c5d2559@26g2000hsk.googlegroups.com>
Source record: 4569

On Sep 6, 9:03 pm, N...@aol.com wrote:
> They didn't do away with Morse Code. They did away with the test
for
> it. It was done a little at a time over the past 30 years.
hey jim:
Sorry I wasn't talking Morse code, .
Real Morse code nobody knows. That is lost already gone kaput history.
Vail invented the code you so aptly call Morse, So it's not real Morse
code
it's Vail code. What is really lost: everybody still calls it Morse
code.

I think I could make some money fire up the ole solar powered kiln and
start growing quartz.
I break out that old ARRL handbook that tells you exactly how to cut
the crystals
for the desired frequencies and sell them for 50 cent apiece.
I'd make so much money in volume sales.

73 OM
n8zu

# 1233. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 17:05:31 UTC
From: jimmie68@gmail.com
Message-ID: <60f04717-818a-47b7-8aa5-a879bb551155@w7g2000hsa.googlegroups.com>
Source record: 4570

On Sep 7, 1:52 am, msg <msg@_cybertheque.org_> wrote:
> jimmi...@gmail.com wrote:
>
> <snip>
>
> > I have found some better schematics on the inverter. It looks like
> > modifying the power supply for amateur QRO is very plausable. Where
> > could I post them so anyone who wanted them would have access?
>
> Please email me at 'msg _at_ cybertheque _dot_ org; I'd be happy
> to put any data you have into a web page.  I have been pondering
> building a HV SMPS for years based on PC PSU parts and have
> been following threads in this N.G. on the oven PSU with interest.
>
> Michael

Its in the mail.
I think if you had transformer from a microwave oven that a circuit
based on a PC power supply would be doable.
The panasonic uwave uses IGBTs instead of FETS or bipolars the way the
PC power supplies do. I think the use of IGBTs is a good idea given
the voltages and currents.
The uwave inverte also operates at 30Khz with the PC operates at about
12Khz.

Jimmie

Jimmie

# 1234. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 17:43:01 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <c21d8dce-3202-4680-899e-b877a2dfffbf@t54g2000hsg.googlegroups.com>
Source record: 4571

On Sep 6, 8:31 pm, N...@aol.com wrote:
> On Sep 2, 4:12 pm, Gary@ removenospamandputkf9cm.com wrote:
>
> > I am looking for some Heterodyne conversion crystals for a receiver I am
> > making.
> > The frequencies are: 5 MHz, 7 MHz, 10.5 MHz, 13.5 MHz, 17.5 MHz and 21.5
> > MHz.
> > The variable mixing frequency will be from 3 to 3.5 MHz. I would prefer all
> > the same type holder.
>.
>
> 73 de Jim, N2EY

What you ain't got no IF?
All those fine numbers and no IF
You know what the image frequency is with no IF?

I think he can get's 12 and 15 meters.
21.5+3.39=24.89 the bottom of the 12 meter band.
21.5+3.49=24.99 the top of the 12 meter band
17.5+3.5=21.0 the bottom of 15 meters for an extra
squeeze the tuning range to 3.95 and
17.5+3,95 =21.45 the top of the 15 meter band.

Back in the day the reason for Heterodyne was simple
to get a lower frequency at which you could amplify the signal
more readily getting you more SN ratio and selectivity.

73 OM

n8zu

# 1235. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 18:43:55 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0809071438030.10097@darkstar.example.org>
Source record: 4572

On Sun, 7 Sep 2008, raypsi wrote:

> On Sep 6, 9:03 pm, N...@aol.com wrote:
> > They didn't do away with Morse Code. They did away with the test
> for
>> it. It was done a little at a time over the past 30 years.
> hey jim:
> Sorry I wasn't talking Morse code, .
> Real Morse code nobody knows. That is lost already gone kaput history.
> Vail invented the code you so aptly call Morse, So it's not real Morse
> code
> it's Vail code. What is really lost: everybody still calls it Morse
> code.
>
> I think I could make some money fire up the ole solar powered kiln and
> start growing quartz.
> I break out that old ARRL handbook that tells you exactly how to cut
> the crystals
> for the desired frequencies and sell them for 50 cent apiece.
> I'd make so much money in volume sales.
>
Nobody has ground their crystals from scratch since about the 1930's,
if even then. I've been licensed since 1972 and in all the time since
then I've never seen anything about it, not in magazines and books
going back to the late 1940's and not in more recent material. I do
recall the 1964 article in QST about a buy in SOuth America who made
his own tubes.

Go back far enough, and hams just needed crystals within the band.
They had relatively little need for exact frequencies.

I suspect even if the Handbook did give such details at one time,
little bits may be lost since when something is current, "everyone
knows" things that may not be obvious to someone who comes later.

Now, they need them on exact frequencies, and they want them in
nice small packages, none of those FT-243 ones that were held together
with pressure.

Even if you can so easily grind a piece of quartz to frequency, packaging
them will be problematic, since a sealed metal case is going to be a lot
more trouble than an FT-243 package.

Michael VE2BVW

# 1236. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 19:35:26 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <72Wwk.50838$4s1.48733@newsfe06.iad>
Source record: 4573

"Michael Black" <et472@ncf.ca> wrote in message
news:Pine.LNX.4.64.0809071438030.10097@darkstar.example.org...
On Sun, 7 Sep 2008, raypsi wrote:

> On Go back far enough, and hams just needed crystals within the band.
They had relatively little need for exact frequencies.

And Novice regulations required the use of Xtal control, a ready
market...

I suspect even if the Handbook did give such details at one time,
little bits may be lost since when something is current, "everyone
knows" things that may not be obvious to someone who comes later.

Tools, techiques, sources for raw or processed materials. WWII
end provided what seemed to be an endless supply of radio
related parts and equipment. Tons of FT-243 xtals, ready to
use or to regrind, etc. I remember when one could find surplus
455kc xtals to make SSB filters; they are unobtanium now.

Pete, k1zjh

Michael VE2BVW

# 1237. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-07 20:59:39 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B12A2B424C882MDWN@194.177.96.78>
Source record: 4574

I'm fairly sure is a zero voltage switching converter with active voltage clamp. The series inductor and the 4uF capacitor form a harmonic filter. The resonant switching circuit is the capacitor in series with the upper switch, the primary inductance of the transformer and the capacitor in parallel with the transformer.

So it can be devolved into a single switch feed forward converter function from the lower switch and resonant energy recovery by the upper switch... which results in a quasi push-pull output.

Search patents by E. Miyata in USPTO for more details.

Considering it's purpose, I'd expect this design's output power is probably in the neighborhood of 750W. Don't confuse this with the name plate rating. Of course the designer didn't consider ICAS service so YMMV.

# 1238. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 00:46:27 UTC
From: N2EY@aol.com
Message-ID: <f7801516-e305-4e1c-ba46-183680704015@d77g2000hsb.googlegroups.com>
Source record: 4575

On Sep 7, 2:43 pm, Michael Black <et...@ncf.ca> wrote:
>
> Nobody has ground their crystals from scratch
> since about the 1930's,
> if even then. I've been licensed since 1972 and in all the time
> since
> then I've never seen anything about it, not in magazines and books
> going back to the late 1940's and not in more recent material.

There were articles in QST in the 1920s about cutting and grinding
your own crystals from the raw quartz, making holders, etc. A lot of
work and specialized equipment. The market was such that the
specialists quickly took over in the early 1930s.

After WW2 the enormous amount of surplus dominated the amateur market
for decades. Many of the "new" FT-243 crystals we bought were actually
surplus holders with new crystal inside.

> I do
> recall the 1964 article in QST about a buy in SOuth America who
> made his own tubes.

There's a guy in France doing it today. Has a movie on his website.
But again, lots of work and specialized equipment.

> Go back far enough, and hams just needed crystals within
> the band.
> They had relatively little need for exact frequencies.

Well, yes and no.

Some xtal frequencies were more prized than others, because the
harmonics fell in higher bands.

> I suspect even if the Handbook did give such details at one time,
> little bits may be lost since when something is current, "everyone
> knows" things that may not be obvious to someone who comes
> later.

That's true of many things. Reading older radio books and magazines
can require knowledge of a lot of the jargon and methods of the day.
>
> Now, they need them on exact frequencies, and they want them in
> nice small packages, none of those FT-243 ones that were held
> together with pressure.

The big difference is plated electrodes vs. pressure electrodes. FT-243s are capable of quite good accuracy; .005% was common, which works out to 200 Hz at 4 MHz.

Pre-WW2 xtals were big and rugged, but used a lot of quartz. Radio-grade natural quartz came almost exclusively from Brazil, and the difficulty of supply caused US xtal makers to develop xtal designs that used less quartz. The FT-243 was ultra-miniature in its time!

73 de Jim, N2EY

# 1239. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 01:11:23 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B12CD624FE752MDWN@194.177.96.78>
Source record: 4576

> Search patents by E. Miyata in USPTO for more details.

I had a nagging feeling that I'd disremembered the circuit
Miyata developed and tried to look it up. Must be an IEEE
paper since there's no patent in his name that I can find.

But these patents may help: 6936803 and 6884977

This paper seems to describe a circuit close to that oven converter.
http://yakimov.homeftp.net/banditko/books/not_books/ieee%20articles%20from%
20ieeexplore/01217760.pdf

# 1240. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 02:18:38 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B12D8C833BE02MDWN@194.177.96.78>
Source record: 4577

It would be interesting to know the phasing of the
transformer windings.

Since it's voltage fed and there is no output inductor
I would have guessed it was a ZVS flyback supply with
active recovery of the leakage inductance energy. A
flyback is a constant power output topology by nature,
so it's a natural for powering a magnetron. But the
waveform in the pdf concering the oven looks like a
forward converter. Maybe it's the result of the active
clamp?

I've designed flyback converters with outputs of a couple
KW for TWT tubes but they were hard switched with multiple
rectified outputs on the transformer stacked series to
reduce the voltage stress. At low output voltages a flyback
is unsuitable for much power because of the high peak current
developed in the rectifiers and switches.

Sorry to babble on about this but I found the oven circuit
fascinating. The white goods guys are very clever.

I hope you can get it working as a power supply for your
amplifier.

# 1241. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 03:37:19 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <8c76492e-23be-4c43-a9a5-8beb24ad8a45@d77g2000hsb.googlegroups.com>
Source record: 4578

On Sep 7, 8:46 pm, N...@aol.com wrote:
> On Sep 7, 2:43 pm, Michael Black <et...@ncf.ca> wrote:
>
>
>
> > Nobody has ground their crystals from scratch
> > since about the 1930's,
> > if even then. I've been licensed since 1972 and in all the time
> > since
> > then I've never seen anything about it, not in magazines and books
> > going back to the late 1940's and not in more recent material.
>
> There were articles in QST in the 1920s about cutting and grinding
> your own crystals from the raw quartz, making holders, etc. A lot of
> work and specialized equipment. The market was such that the
> specialists quickly took over in the early 1930s.
>
> After WW2 the enormous amount of surplus dominated the amateur market
> for decades. Many of the "new" FT-243 crystals we bought were actually
> surplus holders with new crystal inside.
>
> > I do
> > recall the 1964 article in QST about a buy in SOuth America who
> > made his own tubes.
>
> There's a guy in France doing it today. Has a movie on his website.
> But again, lots of work and specialized equipment.
>
> > Go back far enough, and hams just needed crystals within
> > the band.
> > They had relatively little need for exact frequencies.
>
> Well, yes and no.
>
> Some xtal frequencies were more prized than others, because the
> harmonics fell in higher bands.
>
> > I suspect even if the Handbook did give such details at one time,
> > little bits may be lost since when something is current, "everyone
> > knows" things that may not be obvious to someone who comes
> > later.
>
> That's true of many things. Reading older radio books and magazines
> can require knowledge of a lot of the jargon and methods of the day.

> 
> 
> 
> > Now, they need them on exact frequencies, and they want them in
> > nice small packages, none of those FT-243 ones that were held
> > together with pressure.
> 
> The big difference is plated electrodes vs. pressure electrodes.
> FT-243s are capable of quite good accuracy; .005% was common, which
> works out to 200 Hz at 4 MHz.
> 
> Pre-WW2 xtals were big and rugged, but used a lot of quartz. Radio-
> grade natural quartz came almost exclusively from Brazil, and the
> difficulty of supply caused US xtal makers to develop xtal designs
> that used less quartz. The FT-243 was ultra-miniature in its time!
> 
> 73 de Jim, N2EY

Absolutely jim

Looky at the January 1934 issue of QST.it's all there.
A yl friend of mine told me bigger is better, I know she's right
even when it comes to crystals.

As far as accuracy goes you know you can pull it to the frequency you
want
if your'e close enough, it's the oven you need to keep em on
frequency.

73 OM
n8zu

# 1242. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 04:21:45 UTC
From: jimmie68@gmail.com
Message-ID: <0d347e43-d718-4f8c-a1da-620c2a60a472@a1g2000hsb.googlegroups.com>
Source record: 4579

On Sep 7, 10:18 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> It would be interesting to know the phasing of the
> transformer windings.
>
> Since it's voltage fed and there is no output inductor
> I would have guessed it was a ZVS flyback supply with
> active recovery of the leakage inductance energy.  A
> flyback is a constant power output topology by nature,
> so it's a natural for powering a magnetron.  But the
> waveform in the pdf concering the oven looks like a
> forward converter.  Maybe it's the result of the active
> clamp?
>
> I've designed flyback converters with outputs of a couple
> KW for TWT tubes but they were hard switched with multiple
> rectified outputs on the transformer stacked series to
> reduce the voltage stress.  At low output voltages a flyback
> is unsuitable for much power because of the high peak current
> developed in the rectifiers and switches.
>
> Sorry to babble on about this but I found the oven circuit
> fascinating.  The white goods guys are very clever.
>
> I hope you can get it working as a power supply for your
> amplifier.

I have my doubts about using it as is too, but I think there is a lot
to learn here.
For example I hae never used IGBTs before and already I hae begun to
learn. This may also be a chance for me to learn to design a
transformer that will work at 30Khz. I was thinking of using push-pull
driver on the primay of the transformer instead of the flyback
circuit. Something similar to a PC power supply. The Panasonic power
supply is definately designed for constant current. The input current
is monitored through a current transformer and this applied to the
contol circuit so that a decrease in input current results in a
greater output voltage through pulse width modulation. The plan is to
take this feedback from a coil on the output transformer instead of
the current transformer and apply it to the control circuit. I am
hoping this will turn the constant current power supply into a voltage
regulated power supply. Also the output rectifiers use a voltage
doubler. My plan is to change this to a full wave bridge, I think
David mentioned this too. I may not get full legal power out of it but
maybe I can power a couple of 4cx250s. That wouldnt be bad for a $50

power supply.

Jimmie

# 1243. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 05:13:48 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B13256B78F62MDWN@194.177.96.78>
Source record: 4580

If it's a flyback then push-pull drive won't
provide enough voltage. In a flyback the E*T
products of each half cycle have to be equal
or the transformer saturates. You see a flyback
transformer isn't really a transformer. It's
a coupled inductor. The switch charges the core
then the core discharges into the secondary.
Current doesn't flow in both primary and secondary
at the same time.

So the output voltage isn't a function of the
turns ratio but of the ratio of switch's on and
off times. A flyback with voltage feedback control
regulates the output voltage regardless of the
turns ratio. Other considerations demand more
turns for high output voltages, mainly the
secondary voltage is reflected to the primary
and added to the input bus increasing voltage
stress on the switch. The primary turns are
determined by the factors effecting core saturation.

All this leads me back around to thinking it's a single
ended forward converter with resonant reset into the
seconday.

Even if it is some form of ZVS flyback it may be possible
to convert the oven power supply to a voltage regulated
converter with either a voltage divider on the output
or a voltage sensing winding with fewer turns. Because
the volts per turn in the secondaries are fixed by the
control this works well. If the sense winding has 100
times fewer turns the voltage developed by it will be 100
times less. There are some errors due to imperfect
coupling between the windings and the rectifiers Vf but
these can be tweaked out enough to get the regulation
down about 3% with some reasonable minimim load maintained.

There is another topology called a fly-forward that
transfers energy during both the off and on times of
the switch to the secondary. It's bascially a single
ended forward converter that resets the magnetizing
energy into the secondary in flyback mode. I'm
convinced the oven uses resonant switching though so
I doubt that's being used here.

The reason for the very small input filter capacitor
is power factor. With the small filter capacitor the
line current follows the envelop of the switch current.
If the duty cycle is constant over a half cycle then
the current waveform is determined by the line voltage
and then you have nice haversines of current drawn from
the line. If the voltage control circuit response is
fast, then the current will be distorted. With a larger
input filter capacitor the current will look like the
typical uncorrected SMPS with a capacitor input and draw
huge current spikes at the peak of the line as the capacitor
is charged. Then you must draw less power from the line
to account for the low power factor. The input rectifier
might have to be beefed up as well and more agressive inrush
limiting would be needed too.

I hope it's a forward converter then the transformer would
be very handy. I may have to start snagging ovens from the
curb side on trash day. I have a bucket full of 4CX250B
(really, a bucket full) waiting for a home.

And yes, IGBT's rock.

# 1244. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 05:33:40 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <f9e9c4lcg5v75eaiil9ucns4k93uk7gime@4ax.com>
Source record: 4581

N2EY@aol.com wrote:

>My personal theory on why it [code test] was eliminated is this:
>Since the early 1980s, the FCC has been required to do more and more
>stuff with less and less resources. So they have constantly sought out
>ways to reduce their workload, particularly for radio services that
>don't bring in $$, like ham radio.

And another theory is that the code mode is simply obsolete so why test
for it. No more horse driving government tests either. Course
for people who like it, they can still work CW and drive horses.

>But even though the last remnants of the Morse Code test were removed
>back in February 2007, there are still plenty of hams using it on the
>air.

Yea, but there's less and less each year as the old guys die off. I know
you work CW so you know that the vast majority of your CW QSOs are with
people in their 60's and over. One foot in the proverbial grave.

>This past Field Day, for example, the group I went with had one
>Morse Code station and three voice stations, all similarly equipped.
>There were three Morse Code operators and far more voice ops, yet the
>Morse Code station made more QSOs than all the voice stations
>combined. This wasn't a surprise, either.

You don't really call those guys with the computers and keyboards
who ruin the CW bands on contest weekends CW ops do you ???

# 1245. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 10:46:13 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <4c85e482-d4e9-4553-aed7-7de32f2e9786@c65g2000hsa.googlegroups.com>
Source record: 4582

On Sep 8, 1:13 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> If it's a flyback then push-pull drive won't
> provide enough voltage. In a flyback the E*T
> products of each half cycle have to be equal
> or the transformer saturates. You see a flyback
> transformer isn't really a transformer. It's
> a coupled inductor. The switch charges the core
> then the core discharges into the secondary.
> Current doesn't flow in both primary and secondary
> at the same time.
>
> So the output voltage isn't a function of the
> turns ratio but of the ratio of switch's on and
> off times. A flyback with voltage feedback control
> regulates the output voltage regardless of the
> turns ratio. Other considerations demand more
> turns for high output voltages, mainly the
> secondary voltage is reflected to the primary
> and added to the input bus increasing voltage
> stress on the switch. The primary turns are
> determined by the factors effecting core saturation.
>
> All this leads me back around to thinking it's a single
> ended forward converter with resonant reset into the
> seconday.
>
> Even if it is some form of ZVS flyback it may be possible
> to convert the oven power supply to a voltage regulated
> converter with either a voltage divider on the output
> or a voltage sensing winding with fewer turns. Because
> the volts per turn in the secondaries are fixed by the
> control this works well. If the sense winding has 100
> times fewer turns the voltage developed by it will be 100
> times less. There are some errors due to imperfect
> coupling between the windings and the rectifiers Vf but
> these can be tweaked out enough to get the regulation
> down about 3% with some reasonable minimim load maintained.
>
> There is another topology called a fly-forward that
> transfers energy during both the off and on times of
> the switch to the secondary. It's bascially a single
> ended forward converter that resets the magnetizing
> energy into the secondary in flyback mode. I'm
> convinced the oven uses resonant switching though so

> I doubt that's being used here.
>
> The reason for the very small input filter capacitor
> is power factor. With the small filter capacitor the
> line current follows the envelop of the switch current.
> If the duty cycle is constant over a half cycle then
> the current waveform is determined by the line voltage
> and then you have nice haversines of current drawn from
> the line. If the voltage control circuit response is
> fast, then the current will be distorted. With a larger
> input filter capacitor the current will look like the
> typical uncorrected SMPS with a capacitor input and draw
> huge current spikes at the peak of the line as the capacitor
> is charged. Then you must draw less power from the line
> to account for the low power factor. The input rectifier
> might have to be beefed up as well and more agressive inrush
> limiting would be needed too.
>
> I hope it's a forward converter then the transformer would
> be very handy. I may have to start snagging ovens from the
> curb side on trash day. I have a bucket full of 4CX250B
> (really, a bucket full) waiting for a home.
>
> And yes, IGBT's rock.

I agree it's not a flyback.

I don't think it's resonant converter because you looky at VK3HZ's
data on loading it, the duty cycle would take it way out of resonant.

As for power factor with lots of input capacitor filtering, a double
pi AC filter
with toroids would smooth the fawk out of any huge SMPS input
capacitor filter.
When I put a triple pi toroid on the AC line to my 500 watt SMPS
computer
tower, what a big difference, knocked out all kinds of harmonics and
spikes.
And reduce my electric bill. Is that like stealing from the electric
co?

73
n8zu

# 1246. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 11:19:03 UTC
From: N2EY@aol.com
Message-ID: <994d3a07-ce3f-4e15-a9c3-f230df91c986@c65g2000hsa.googlegroups.com>
Source record: 4583

On Sep 8, 1:33 am, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >My personal theory on why it [code test] was eliminated is this:
> >Since the early 1980s, the FCC has been required to do more and more
> >stuff with less and less resources. So they have constantly sought out
> >ways to reduce their workload, particularly for radio services that
> >don't bring in $$, like ham radio.
>
> And another theory is that the code mode is simply obsolete so why test
> for it. No more horse driving government tests either. Course
> for people who like it, they can still work CW and drive horses.

That theory doesn't hold water because Morse Code isn't obsolete on
the HF/MF ham bands. You hear a lot more hams using Morse Code on
those bands than you see people riding or driving horses.

A much more reasonable theory would be that most states do not test a
driver's ability to operate a manual transmission.

> >But even though the last remnants of the Morse Code test were removed
> >back in February 2007, there are still plenty of hams using it on the
> >air.
>
> Yea, but there's less and less each year as the old guys die off.

That doesn't seem to be happening. Groups such as FISTS and SKCC have
increasing numbers of members. Participation in contests using Morse
Code isn't declining increasing even with terrible sunspot numbers.
Look at the results of the ARRL 160 meter contest for the past several
years - and it's all-CW.

> I know
> you work CW so you know that the vast majority of your CW QSOs are with
> people in their 60's and over.

No, they're not. Sure there are lots of hams who are senior citizens
but there are also a lot who aren't - and who use Morse Code on the
air.

Plus the whole US population is getting older. People are living
longer and having fewer kids, for one thing. The median age for US
residents back in 2000 was 39 years and some months (according to the
Census Bureau). And it keeps increasing.

One foot in the proverbial grave.

How old are *yiu*? I'm 54, been a ham 41 years.

What led me to my theory is that the FCC didn't just drop the Morse Code tests, they simplified and reduced all the testing as well as the administrative procedures. For almost 30 years, every change was in the direction of making less work for FCC, to save resources.

> >This past Field Day, for example, the group I went with had one
> >Morse Code station and three voice stations, all similarly equipped.
> >There were three Morse Code operators and far more voice ops, yet the
> >Morse Code station made more QSOs than all the voice stations
> >combined. This wasn't a surprise, either.
>
> You don't really call those guys with the computers and keyboards
> who ruin the CW bands on contest weekends CW ops do you ???

Why not? All the computer does is keep the log and maybe call CQ. The 'phone stations had the same computer logging system, all networked to a central server. Yet the CW ops outdid them easily.

As for "ruining the CW bands" - the only "CW bands" in Part 97 are the bottom 100 kHz of 6 and 2 meters. All the other bands where CW is allowed share the space with other modes, such as RTTY and PSK31.

It's just beautiful when the bands are full of hams making QSOs. Not "ruined" at all.

73 de Jim, N2EY

# 1247. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 15:08:45 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <2eGdnflJqPAwo1jVnZ2dnUVZ_h-dnZ2d@posted.cpinternet>
Source record: 4584

raypsi wrote:

<snip>
> I agree it's not a flyback.
>
> I don't think it's resonant converter because you looky at VK3HZ's
> data on loading it, the duty cycle would take it way out of resonant.
>

Thanks to jimmie for the PDF service manual; inspection of the schematics shows differences between the block diagram (which seems to show a resonant configuration) and the inverter detail schematic (which shows a voltage doubler configuration). There are also mistakes in wiring runs (circuit box outlines confused as wires and having cross-connect dots misplaced, etc.). After accounting for these, the above assumptions seem correct.

A quick web search for inverter microwave ovens seems to yield only Panasonic models, and the cheapest in my area is $158.00 at Walmart. To me, this isn't really cost-effective, and they are too new to be found in the alley. I intend to continue to explore utilizing PC PSU parts to build an HV supply.

Michael

# 1248. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 16:33:14 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <bpgac45i0hkk6afei7ve2338u3h4q9un6f@4ax.com>
Source record: 4585

N2EY@aol.com wrote:

>That theory doesn't hold water because Morse Code isn't obsolete on
>the HF/MF ham bands.

The code may be fun to use as a *hobby* but it is obsolete
as in the dictionary definition: to become disused, old fashioned,
and no longer up to date.

The FCC (and the rest of the world) just recognized that
requiring people to become human modems to
get a ham license didn't make sense. Maybe it did in WW2
when a pool of human CW ops was needed, but certainly not now.

>Groups such as FISTS and SKCC have
>increasing numbers of members.

You won't win this one on the numbers. Do you really
think the number of active CW ops today compares
with the numbers there were in the 50s?

>Participation in contests using Morse Code isn't declining...

No unfortunately contests are just as bad as ever.

>the only "CW bands" in Part 97 are the
>bottom 100 kHz of 6 and 2 meters.

Playing word cop is not your style, sorry to see you do it. The
'CW bands' are common ham jargon not lawyer speak. Just as
using the term CW when you mean the code mode.

## 1249. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 21:10:57 UTC
From: JB <nospam@goofball.net>
Message-ID: <Bxgxk.752$Af3.403@trnddc06>
Source record: 4586

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:bpgac45i0hkk6afei7ve2338u3h4q9un6f@4ax.com...
> N2EY@aol.com wrote:
>
> >That theory doesn't hold water because Morse Code isn't obsolete on
> >the HF/MF ham bands.
>
> The code may be fun to use as a *hobby* but it is obsolete
> as in the dictionary definition: to become disused, old fashioned,
> and no longer up to date.
>
> The FCC (and the rest of the world) just recognized that
> requiring people to become human modems to
> get a ham license didn't make sense. Maybe it did in WW2
> when a pool of human CW ops was needed, but certainly not now.
>
> >Groups such as FISTS and SKCC have
> >increasing numbers of members.
>
> You won't win this one on the numbers. Do you really
> think the number of active CW ops today compares
> with the numbers there were in the 50s?
>
> >Participation in contests using Morse Code isn't declining...
>
> No unfortunately contests are just as bad as ever.
>
> >the only "CW bands" in Part 97 are the
> >bottom 100 kHz of 6 and 2 meters.
>
> Playing word cop is not your style, sorry to see you do it. The
> 'CW bands' are common ham jargon not lawyer speak. Just as
> using the term CW when you mean the code mode.
>

You'd think that now that no one is being forced, it shouldn't be an issue. Maybe the real problem all along was people who really have a problem with other people's hobbies. You people really need to quit bashing each other's hobby. What you screw around and loose for someone else, you lose too. Obsolete is a favorite word of the salesman that wants to con you out of what you have, to sell you something else. For better or worse. So don't buy into it. You need to understand that the FCC really doesn't want to be bothered with Ham Radio at all. That's been motivating nearly everything they have done since the 70's. But, Ok a bunch of whiners screamed and

cried and held their breath and now even the Extra Class is code free. Doesn't make much sense because all you get is some CW subbands anyway.

All the Anti-CW arguments could easily be used against Ham Radio in general. I don't even want to hear obsolete. I still have a manual typewriter to fill out odd forms and in case power goes out. I still have a VCR because there are movies that I don't see on DVD yet. I even use CW on VHF and above to make contacts that can't seem to be done any other way. People scream about Digital! Digital! OK WHICH DIGITAL do you use. There are more than a dozen modes out there, so how are you going to make the contact that is gone in 60 seconds because of propagation? Let me know when you have a free software package that instantly decodes ANY MODE and doesn't even require a computer or extra hardware, is operable across all bands and digs weak signals better than CW, then CW will be obsolete. The fact that CW is allowed EVERYWHERE and can be received by any SSB RCVR make it a universal mode of communications. It is also the most useful means of station identification. Don't tell me it's obsolete if you don't know anything about it.

There is a rail system in India that was set up in the 20's and is still in use because it works so well for what they use it for. They would screw up a good thing to try to replace it with anything more complex.

# 1250. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 22:43:04 UTC
From: jimmie68@gmail.com
Message-ID: <3b5ac1cc-c1b7-4c73-948d-92fc8a40f1c4@l64g2000hse.googlegroups.com>
Source record: 4587

On Sep 8, 11:08 am, msg <msg@_cybertheque.org_> wrote:
> raypsi wrote:
>
> <snip>
>
> > I agree it's not a flyback.
>
> > I don't think it's resonant converter because you looky at VK3HZ's
> > data on loading it, the duty cycle would take it way out of resonant.
>
> Thanks to jimmie for the PDF service manual; inspection of the
> schematics shows differences between the block diagram (which
> seems to show a resonant configuration) and the inverter detail
> schematic (which shows a voltage doubler configuration). There
> are also mistakes in wiring runs (circuit box outlines confused
> as wires and having cross-connect dots misplaced, etc.). After
> accounting for these, the above assumptions seem correct.
>
> A quick web search for inverter microwave ovens seems to yield
> only Panasonic models, and the cheapest in my area is $158.00
> at Walmart.  To me, this isn't really cost-effective, and they
> are too new to be found in the alley.  I intend to continue
> to explore utilizing PC PSU parts to build an HV supply.
>
> Michael

The part can be bought as a spare for about $40 or $50 dollars.
I have found a couple of them at Goodwill. I would have be tearing
into it but our 20 year old microwave finally bit the dust so my wife
put claim on this one.
I have also seen them setting on the curb on trash day. On was on my
way out and thought I would pick it up on my way back in. Didnt work
out. Since I started looking for them it seems there are two common
reasons people get rid of old microwaves. One is to have the latest ,
greatest model and the other is because the digital display quits
working. Any sort of failure out of warranty usually means a trip to
the curb.

THESE MUST BE OPERATED UNDER LOAD OR THEY WILL SMOKE.

At least that is what happend to mine.

Jimmie

# 1251. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 23:05:57 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B13B81E3D6952MDWN@194.177.96.78>
Source record: 4588

> raypsi wrote:
>
> <snip>
>> I agree it's not a flyback.
>>
>> I don't think it's resonant converter because you looky at VK3HZ's
>> data on loading it, the duty cycle would take it way out of resonant.
>>

I'm sorry, I should have been more precise in my use of terms.

It's zero voltage switching or ZVS which is resonant transition.
The resonance is much higher than the swicthing frequency and it
isn't effected by the changes in duty cycle. Although it does
steal some on-time

Sometimes it's called quasi-resonant and there's a variant called
ZCS or zero current switching.

It's not a resonant converter like series or parallel resonant
converters where the output is controlled by shifting the frequency.

# 1252. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 23:13:05 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B13B9538BB5A2MDWN@194.177.96.78>
Source record: 4589

> THESE MUST BE OPERATED UNDER LOAD OR THEY WILL SMOKE.
>
> At least that is what happend to mine.
>
> Jimmie

Oh, sorry to hear that. Yeah, it's a bad idea to operate
any switch mode power supply without a minimum load unless
the min. load is built-in or the thing is so inefficent that
its own losses make up the minimum load. The output diodes
probably didn't like that... just my guess.

I found some interesting stuff on the panasonic inverter.

On the fusor chat they claim it's 85% efficient and good for
1200W. The efficiency seems right, the 1200W seems... optimistic.

Also this, instructions on getting the inverter to play.
http://www.fusor.net/board/view.php?site=fusor&bn=fusor_hvpower&key=1162079
046

## 1253. CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 23:18:06 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <a8abc4t7cmh77v6pjmnni8ls565i9mt1g8@4ax.com>
Source record: 4590

I changed the header subject to better reflect the discussion.

"JB" <nospam@goofball.net> wrote:

> You need to understand that the FCC really doesn't want to be
>bothered with Ham Radio at all.

That's probably true.

>That's been motivating nearly everything they have done since the 70's.

I think that the ARRL had more to do with the snafu's of that era. For
example incentive licensing.

>now even the Extra Class is code free.

As is the free memorization EC exam. No real electronic knowledge
required to pass.

>I still have a manual typewriter to...
>I still have a VCR because...
>I even use CW on VHF and...

Typewriters, VCRs and CW are all obsolete by todays
technical standards. Some still use them because like
you and I they like to. That doesn't make them less old
technology. (Think horse/buggy analogy)

>OK WHICH DIGITAL do you use.

Head copy.

> how are you going to make the contact that is gone in 60 seconds

I'm not. I prefer CW ragchewing. Different strokes...

>Don't tell me it's obsolete if you don't know anything about it.

Got my Novice in 57. Been doing CW ever since. But only as a hobby since
it's obsolete and not good for much else...

# 1254. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 23:28:44 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B13BBFB5D1832MDWN@194.177.96.78>
Source record: 4591

Oh!

I forgot to mention soft-switching, that's the
most common catch-all term.

# 1255. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-08 23:51:49 UTC
From: Lawrence Statton <yankeeinexile@gmail.com>
Message-ID: <878wu2urfu.fsf@hummer.cluon.com>
Source record: 4592

AJ Lake <nomail@fakeaddress.com> writes:
> > You need to understand that the FCC really doesn't want to be
> >bothered with Ham Radio at all.
>
> I think that the ARRL had more to do with the snafu's of that era. For
> example incentive licensing.
>

So, I'm a young whippersnapper (42 y/o ... got my Tech+ ticket in
1988): Can someone, without adding TOO much editorial slant, explain
what the 1970s push to incentive licensing was, and with as little
slant as possible explain why it was a SNAFU (or as one 1x2 in the
first club I was in said: Ruined the service).

--XE2/N1GAK

# 1256. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 02:15:24 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <d531292f-3f87-4a8d-bc37-e5a34bfde383@f36g2000hsa.googlegroups.com>
Source record: 4593

On Sep 8, 7:13 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> > THESE MUST BE OPERATED UNDER LOAD OR THEY WILL SMOKE.
>
> > At least that is what happend to mine.
>
> > Jimmie
>
> Oh, sorry to hear that.  Yeah, it's a bad idea to operate
> any switch mode power supply without a minimum load unless
> the min. load is built-in or the thing is so inefficent that
> its own losses make up the minimum load. The output diodes
> probably didn't like that... just my guess.
>
> I found some interesting stuff on the panasonic inverter.
>
> On the fusor chat they claim it's 85% efficient and good for
> 1200W.  The efficiency seems right, the 1200W seems... optimistic.
>
> Also this, instructions on getting the inverter to
play.http://www.fusor.net/board/view.php?site=fusor&bn=fusor_hvpower&key=1...
> 046

Hey mule:
Your url got cropped.

The inverter PS I have can be fooled into thinking it has a load.

There is a current sense I found and a voltage sense
both on the primary side.
It's a piece of cake opto coupling a signal back
to those sense inputs. they are both straight voltage dividers
with Vrefs. And the current sense uses a 50K ohm trim pot for
adjustment.

They use a 100meg bleeder for a load. And the filament which is at
least
150 watts, loads the supply too.

I suspect my 120VAC inverter will work off of 240VAC

And if you take out the filament circuit that gives yoiu an extra 150
watts.
I suspect I can gits 1500 watts from my 1300 watt interer PS, with
input
filtering of the DC off the mains.

But the final report wont happen until i gits the feedback circuit wired.
That will prevent it from trying to produce 1300 watts into no load.
With no load it will try to up the voltage to produce more current. Which it can't
produce more current so it keeps increasing the voltage untill it lets out the smoke,

When it hits 3000 volts I will fool the sense circuits: a voltage divider for
the current sense and another divider for the voltage sense, into seeing 1300 watts.

Another trick is to run the mains off a variac starting at 10 VAC very slow. Also supply seperate power to the PWM IC circuit,
Just to see how far it will go, and not get it to go into run away.

I see the power trouble how can you gits 1300 watts out of that little bitty core?
That's what they used to say about silicone diodes when they used to replace a 5U4 tube.
They used to tell me how can a little piece of wire with a bead on it replace a tube as big as your fist
no freaking way. I also made a living selling 2.5 amp 1000 piv diodes.

I mean the primary of this thing uses litz wire that looks like 10AWG wire about 13 turns around the core
and they using 4 strands of 28 AWG to run the filament
The HV secondary measures only 6.8 ohms DC.

73 OM

n8zu

# 1257. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 02:58:35 UTC
From: JB <nospam@goofball.net>
Message-ID: <vDlxk.734$Dj1.531@trnddc02>
Source record: 4594

"Lawrence Statton" <yankeeinexile@gmail.com> wrote in message
news:878wu2urfu.fsf@hummer.cluon.com...
> AJ Lake <nomail@fakeaddress.com> writes:
> > > You need to understand that the FCC really doesn't want to be
> > >bothered with Ham Radio at all.
> >
> > I think that the ARRL had more to do with the snafu's of that era. For
> > example incentive licensing.
> >
>
> So, I'm a young whippersnapper (42 y/o ... got my Tech+ ticket in
> 1988): Can someone, without adding TOO much editorial slant, explain
> what the 1970s push to incentive licensing was, and with as little
> slant as possible explain why it was a SNAFU (or as one 1x2 in the
> first club I was in said: Ruined the service).
>
> --XE2/N1GAK
>
As I remember it...
I am not sure what the ARRL had to do with events previous to 73 and some of the chronology from memory.

The 11 meter ham band was taken away to make the Citizens Band in 58? It didn't turn out anything like the FCC expected. Previously there were fewer ham license classes and everyone was on the same page. Also privileges were taken away from the highest class to make a higher ones. Ticked off a lot of Hams to lose.

The Technician License split ham radio into two factions by offering a license class that had little incentive to upgrade and actually made it much more difficult to, by limiting the opportunities for on-the-air training. People who took the Novice ticket were upgraded to General in less than 2 years or never got around to get on the air and let it lapse. Hams (in my area anyway) were expected to build something as a right of passage. Building a code practice oscillator would get you a pat on the back from everyone and you were in with the simplest project there was. I built that and the power supplies for my mil surplus rigs. Some guys built a whole Novice station. Techs at that time were expected to retune or modify a rig or some project as well but would go straight to CB like intercom operations not conducive to learning the HF skills for upgrade. In my day we were aware of a difference but we were all brother hams then. I had Elmers that were Techs and beyond. Most all were technically inclined enough to have built something. People were generally civilized and knew that we were all on the same team. If there was irritation between individuals, and there were oddballs, it was downplayed for the good of amateur radio, because it

was a small world and people were listening. And you would run into each other again and again, so no sense carrying a grudge.

That was the reality of it, whatever your point of view of how it should have been.

In the late 70's there was a push by ARRL to get CBers interested, and over the counter 2 meter radios were first becoming available.

ARRL didn't seem to understand that CB was a different service with a different mindset and many were already set in their ways. They seemed to be willing to get people to hang outside of RS stores and lure CBers under false pretenses about amateur radio in order to pump up the license roles and subscriptions to QST. Wayne Green was one of the ticked off ones and started 73 magazine to rag about the ARRL and QST. ARRL also convinced the FCC (easily) to set up the volunteer examiner program. Novice exams were already given by volunteer Extras. FCC wanted to lighten their work load since Ham testing and licensing was taking up most of a day at the field offices.

License renewals were then made easier and for longer. ARRL liked it because the rolls didn't drop out so fast and FCC didn't have to bother as often.

The volunteer examiner program gave seminars to get people licensed but because of the accellerated pace, people got licensed before they got a chance to learn the realities of getting on the air and keeping a station up and meeting the people. Some people would find it not their cup of tea and leave but their license was now good for 10 years pumping up the rolls.

The no-code Tech license 83? further divided amateurs and even further sidetracked Techs from upgrading. Lead time for getting a ticket was shortened from the 2 to 6 months or so to learn the code to as little as 6 weeks, then 2 weeks as the process refined. It was notable that in the 80s, there were many who learned the code anyway and upgraded but the whole thing by and large tended to split Ham Radio into those who upgraded and those who couldn't very well.and were often frustrated. Many would tell themselves they just weren't interested and resented the others. Way too sad. I finally came to grips with the idea that they should do away with the Tech class license at all costs, even getting rid of code testing for the General to do it, just so we could mend the split. I was stunned when they dropped the code requirement for Extra though. I really haven't kept track of all the current structure since I got my Extra in 93.

In any case, the "incentive" licensing structure was anything but incentive. So much for good intentions. ARRL has done a lot of good things but some major screwups too. Support them but keep an eye on them and keep them straightened out.

# 1258. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 04:25:56 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <e1ubc4te65qf6mumohsqmvf32arail0jgh@4ax.com>
Source record: 4595

Lawrence Statton <yankeeinexile@gmail.com> wrote:

>Can someone, without adding TOO much editorial slant, explain
>what the 1970s push to incentive licensing was,

Shamelessly copied from: http://ham-shack.com/history.html. Check here for the history before and after the event.

"1967-The FCC announced the new Incentive Licensing rules: over the next 2 years, General & Conditional operators would lose 50% of the 75-15 meter phone bands, the "First Class" idea was dropped, the Advanced Class was reopened to new applicants, Extra & Advanced Class operators get exclusive subbands on 80-15 and 6 meters, the Novice license term is doubled to two years, but Novices lose their 2 meter phone privileges, the FCC restates the "Technicians are experimenters, not communicators" policy, and states that the next license step for Novices is the General, not Technician, class."

>and with as little slant as possible explain why it was a SNAFU

That SNAFU of course is a slant by those of us who lost privileges in the new licensing system. I was a General at the time. I actually had to buy a Bash book to get them back...

# 1259. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 04:32:57 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <5J-dnfuHefy0ZljVnZ2dnUVZ_u2dnZ2d@posted.cpinternet>
Source record: 4596

JB wrote:

<snip>
>
> The Technician License split ham radio into two factions by offering a
> license class that had little incentive to upgrade and actually made it much
> more difficult to, by limiting the opportunities for on-the-air training.
> People who took the Novice ticket were upgraded to General in less than 2
> years or never got around to get on the air and let it lapse. Hams (in my
> area anyway) were expected to build something as a right of passage.
> Building a code practice oscillator would get you a pat on the back from
> everyone and you were in with the simplest project there was. I built that
> and the power supplies for my mil surplus rigs. Some guys built a whole
> Novice station. Techs at that time were expected to retune or modify a rig
> or some project as well but would go straight to CB like intercom operations
> not conducive to learning the HF skills for upgrade.

Hmmm, first time I've read such an opinion regarding original Techs; in my
experience, Techs concentrated on building, experimenting and exploiting
VHF, UHF and above and had less inherent interest in HF. Some were just
unable to muster higher CW wpm for other tickets.

> In my day we were aware of a difference but we were all brother hams then.
> I had Elmers that were Techs and beyond.

Perhaps you are referring to later model Techs; the term 'Elmer' didn't exist
during the day to which I refer.

Michael

# 1260. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 13:42:04 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <956f3fee-69e8-4782-bbc8-67b1eaac39f8@34g2000hsh.googlegroups.com>
Source record: 4597

On Sep 8, 7:51 pm, Lawrence Statton <yankeeinex...@gmail.com> wrote:
> AJ Lake <nom...@fakeaddress.com> writes:
> > > You need to understand that the FCC really doesn't want to be
> > >bothered with Ham Radio at all.
>
> > I think that the ARRL had more to do with the snafu's of that era. For
> > example incentive licensing.
>
> So, I'm a young whippersnapper (42 y/o ... got my Tech+ ticket in
> 1988):  Can someone, without adding TOO much editorial slant, explain
> what the 1970s push to incentive licensing was, and with as little
> slant as possible explain why it was a SNAFU (or as one 1x2 in the
> first club I was in said:  Ruined the service).

Look in the letters section of a 50's QST, there's rants and raves
from both sides on incentive licensing.

Look in the letters section of a 60's QST, there's rants and raves
from both sides on incentive licensing.

The controversy in the 70's was the Technician license, a ticket that
required no code, as a way to get some CB'ers to take notice. I myself
came to ham radio in the 70's but had no interest in anything having
to do with Technician privileges. I know many other hams who did come
in that way in the 70's, 80's, etc.

Tim N3QE

# 1261. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 16:53:06 UTC
From: JB <nospam@goofball.net>
Message-ID: <SRxxk.755$Dj1.516@trnddc02>
Source record: 4598

"msg" <msg@_cybertheque.org_> wrote in message
news:5J-dnfuHefy0ZljVnZ2dnUVZ_u2dnZ2d@posted.cpinternet...
> JB wrote:
>
> <snip>
> >
> > The Technician License split ham radio into two factions by offering a
> > license class that had little incentive to upgrade and actually made it
much
> > more difficult to, by limiting the opportunities for on-the-air
training.
> > People who took the Novice ticket were upgraded to General in less than
2
> > years or never got around to get on the air and let it lapse. Hams (in
my
> > area anyway) were expected to build something as a right of passage.
> > Building a code practice oscillator would get you a pat on the back from
> > everyone and you were in with the simplest project there was. I built
that
> > and the power supplies for my mil surplus rigs. Some guys built a whole
> > Novice station. Techs at that time were expected to retune or modify a
rig
> > or some project as well but would go straight to CB like intercom
operations
> > not conducive to learning the HF skills for upgrade.
>
> Hmmm, first time I've read such an opinion regarding original Techs; in my
> experience, Techs concentrated on building, experimenting and exploiting
> VHF, UHF and above and had less inherent interest in HF. Some were just
> unable to muster higher CW wpm for other tickets.
>
> > In my day we were aware of a difference but we were all brother hams
then.
> > I had Elmers that were Techs and beyond.
>
> Perhaps you are referring to later model Techs; the term 'Elmer' didn't
exist
> during the day to which I refer.
>
> Michael

Of course there were variations in your experience depending on the crowd
you fell in with. To this day, the club experience tends to be limiting for
those who want to explore in depth, the great variety of interests that ham

radio has to offer. There are in fact many, many specialties and sub-interests within amateur radio. If you try to list what they are, you keep adding to the list indefinitely. Clubs tend to promote the entry and political interests and get preoccupied there. If people in a club are ragging about lack of Elmers or Technological interest in ham radio, it is because the club itself has become stagnant with a lack of imagination, like the teenager who sits around watching TV and complaining about being bored. Boring people actually bore themselves. In my experience, most hams don't show up at the local ham club because they have other Ham Radio interests.

Your Experience (above, re: Techs vs. HF) is proof of what comes of promoting a division within ham radio. Politics should have learned by now that the 2 party system has become the same kind of disaster. The Electoral system used to have several parties and candidates and the winner became President and runner-up was Vice-President, regardless of political party. Probably more aggravation for the cabinet, but more of a stabilizing influence on our nation. Our current system has actually promoted a rift in America that gets farther apart as we go our separate ways in order to avoid drowning in the middle. Eventually this could lead to another Civil War but I digress.

An Elmer was everyone who was willing to share what they had learned. The term and the people were there long before I decided to be a ham, perhaps pre-war QST. The first thing I learned was that with so many sub-interests, the only way I could hope to experience it all was vicariously. By visiting the garages and hamshacks to see what other people had done. Antenna experimenters, transmission line specialists who conversed with Smith Charts. Teletype experimenters who were cobbling home made digital controllers to their model 28s, that would become the home computer. People who did various mods and projects involving existing equipment, People who built their own equipment. Even one poor kid in High School who built a full QRP station onto his bicycle from transistor radio parts and other junk. This guy had a bit of an inferiority complex, because when he would show people the construction and circuit designs (often modular with junk boards modified and cabled together in a re-used cabinet) they would become very interested and of course the "why did you do it this way" question would always set him off. Some would joke him over that. I had to remind him often to put away his anguish and realize they were in fact impressed by his accomplishments and what was happening was in fact a by product of their curiosity and envy. Although I was an Advanced and He was a Novice, it didn't change the fact that we were both Elmers in our own right. We become Elmers to each other as long as we don't pout and cry over normal human relations.

I realize that pouting and crying over normal human relations has become some sort of fashionable thing lately. I don't think it is a good thing. Maybe it is from people being told by their Psychiatrist (like Cops, depend on repeat business) that everything will be OK if they let their emotions take control, and that it is perfectly normal to throw tantrums or hump people's leg in public. Makes good press though.

## 1262. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 16:58:59 UTC
From: Bert Hyman <bert@iphouse.com>
Message-ID: <Xns9B1479DA0DD7EVeebleFetzer@127.0.0.1>
Source record: 4599

nomail@fakeaddress.com (AJ Lake) wrote in
news:a8abc4t7cmh77v6pjmnni8ls565i9mt1g8@4ax.com:

> Got my Novice in 57. Been doing CW ever since. But only as a hobby

You do realize that ham radio itself is only a hobby, don't you?

--
Bert Hyman | St. Paul, MN | bert@iphouse.com

# 1263. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 17:00:20 UTC
From: JB <nospam@goofball.net>
Message-ID: <EYxxk.44$SA.39@nwrddc02.gnilink.net>
Source record: 4600

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:e1ubc4te65qf6mumohsqmvf32arail0jgh@4ax.com...
> Lawrence Statton <yankeeinexile@gmail.com> wrote:
>
> >Can someone, without adding TOO much editorial slant, explain
> >what the 1970s push to incentive licensing was,
>
> Shamelessly copied from: http://ham-shack.com/history.html. Check here for
> the history before and after the event.
>
> "1967-The FCC announced the new Incentive Licensing rules: over the next 2
> years, General & Conditional operators would lose 50% of the 75-15 meter
> phone bands, the "First Class" idea was dropped, the Advanced Class was
> reopened to new applicants, Extra & Advanced Class operators get exclusive
> subbands on 80-15 and 6 meters, the Novice license term is doubled to two
> years, but Novices lose their 2 meter phone privileges, the FCC restates
the
> "Technicians are experimenters, not communicators" policy, and states that
> the next license step for Novices is the General, not Technician, class."
>
> >and with as little slant as possible explain why it was a SNAFU
>
> That SNAFU of course is a slant by those of us who lost privileges in the
> new licensing system. I was a General at the time. I actually had to buy
a
> Bash book to get them back...

So it was FCC after all that formed the opinion. Sounds like a conspiracy
theory to keep us preoccupied with infighting.

# 1264. видео Бритни и Кевина.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 17:15:55 UTC
From: tamarmadgecay@gmail.com
Message-ID: <ad600da9-6bba-45fe-a5f3-14eca1e4ed52@59g2000hsb.googlegroups.com>
Source record: 4451
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

Смотри, как она сосет член, она лучшая! http://ragdai.info/golaya-pravda.htm
Это видео супер!

# 1265. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 17:31:07 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <p3cdc4trk2no18blppr7svmnn3moq5ebvv@4ax.com>
Source record: 4452

Bert Hyman <bert@iphouse.com> wrote:
>nomail@fakeaddress.com (AJ Lake) wrote in

>> Got my Novice in 57. Been doing CW ever since. But only as a hobby
>
>You do realize that ham radio itself is only a hobby, don't you?

In the 50s some hams I knew not only used ham radio
as a hobby but actually got paid for working CW, either aboard
ship or at coastal commercial radio stations. I had the CW
(and technical) skills at the time to be considered for employment.

So as I said I've worked CW since 57 but only as a hobby...

# 1266. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 17:41:32 UTC
From: JB <nospam@goofball.net>
Message-ID: <gzyxk.913$Wd.22@trnddc01>
Source record: 4453

> I changed the header subject to better reflect the discussion.

Unfortunately we lose the thread that way: I think here is where it
departed:
"raypsi" <RBorowiak@gmail.com> wrote in message
news:7509c4db-2511-45f2-a4ee-f3a9e1801742@26g2000hsk.googlegroups.com...
On Sep 3, 2:54 pm, Michael Black <et...@ncf.ca> wrote:
> On Wed, 3 Sep 2008, raypsi wrote:
> > Hey Gary,
>
> > Rocks aren't cheap ...
I know the real reason crystals took a back seat, and it's not what anybody
thinks
happened.

73 OM

n8zu
>
> >now even the Extra Class is code free.
>
> As is the free memorization EC exam. No real electronic knowledge
> required to pass.

And no experience necessary.

> Typewriters, VCRs and CW are all obsolete by todays
> technical standards. Some still use them because like
> you and I they like to. That doesn't make them less old
> technology. (Think horse/buggy analogy)

So obsolete means there is no commercial or consumer application that
immediately comes to mind, or does it mean that it is fun to do???

So the word "obsolete" is a subjective word reflecting your own usage.
Could something be obsolete if it was old but was better suited to your
application? Or does that make your application obsolete? Is the
automobile obsolete because of air travel? Is rail transportation obsolete
because of trucks? Does obsolete most often refer to something you don't
want someone else to use? Is the word "obsolete" obsolete because too many
definitions have become attatched to it?

> >OK WHICH DIGITAL do you use.
> Head copy.
> > how are you going to make the contact that is gone in 60 seconds
> I'm not. I prefer CW ragchewing. Different strokes...

Bingo! Now what of the guy that has called CQ two or three times and goes away?
Head copy is the only way to pounce on the contact before they QSY or someone else picks them up.

It means YOUR BRAIN might not be obsolete after all!!

# 1267. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 17:49:04 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <Pine.LNX.4.64.0809091344450.12702@darkstar.example.org>
Source record: 4454

On Mon, 8 Sep 2008, AJ Lake wrote:

>
I changed the header subject to better reflect the discussion.
>
If it's off-topic enough that you know to change the subject,
then take it elsewhere.

I should have posted last night before all the other carpetbaggers
came out of the woodwork, but foolishly hesitated.

You have no history here, yet you pounce the minute someone posts
about CW, someone who has been here a long time. And then a bunch
of others suddenly appear, even though they don't post about building
amateur radio equipment here.

There is rec.radio.amateur.policy and rec.radio.amateur.misc and
even rec.radio.amateur.moderated where you can have your debates
to your heart's content. And surely you and the other carpetbaggers
would fit in better there, since you don't have anything to say
about building radios.

This is not the first time you pouncers have landed here. The last
time I remember it happening, the one idiot even cross-posted his
reply to rec.radio.amateur.antennas, even though the topic fit
neither newsgroup. I didn't read the newsgroup for a month after
that, even though I've been reading and posting here for over a decade.

It's idiots like you that kill the newsgroups, seeing offtopic posts
as perfectly fine, while those who want to talk about what the newsgroup
is about slowly disappear.

Keep the trash out of here, you and the other carpetbaggers.

Michael VE2BVW

# 1268. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 17:52:59 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <0scdc4582ltglcqt8vnp5r1an55h71nnr3@4ax.com>
Source record: 4455

Tim Shoppa <shoppa@trailing-edge.com> wrote:

>The controversy in the 70's was the Technician license, a ticket that
>required no code,

Interestingly in the 50s the Technician (and Novice) was given
by mail. And any ham friend could give you the code test.
Anyone else could proctor your exam and certify that you
were honest. However I'm sure it won't surprise you to learn
that there were many Techs who never took a code
test and had open book exams.

I always wondered why if the Tech was an experimenters
license as the FCC claimed it was, why they required a code
test.

The Tech was a very popular license, especially in the
late 50s when we had the best sun spot peak on
record. I had a modest Globe Scout 680 with about
20W out on 6 meters to a 5 element Taco beam
up about 30' , AM of course. The Rx was a war surplus
BC455 (7$ brand new mail order) and an International
Crystal 6 meter converter. The Tx was crystal controlled
so you called CQ and then tuned the lower band for
an answer. The band was open stateside every day
and my state count on 6M was in the 40s before
I got my General and moved to 10M which was even
better. DX openings were often and my country count
was in the 50s. That was indeed a fun time...

# 1269. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 18:13:58 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <abedc4dl2dtduufclno30koh69srg5gmvn@4ax.com>
Source record: 4456

Michael Black <et472@ncf.ca> wrote:

>If it's off-topic enough that you know to change the subject,
>then take it elsewhere.

Ah, another net cop with no delete key.

>You have no history here, yet you pounce the minute someone posts
>about CW, someone who has been here a long time.

I've been in these groups since the early 90s. I used to identify
but had a bad experience with a net cop.

> And then a bunch
>of others suddenly appear, even though they don't post about building
>amateur radio equipment here.

Off topic happens. Heck they're talking God stuff in the
antenna group. Why aren't you complaining there?
And who's it hurt anyway? It's not like this place is
flooded with posts every day.

>There is rec.radio.amateur.policy

Right. The kooks have taken over rrap with their profanity and
other sick stuff. That was a fun group some years back

>It's idiots like you that kill the newsgroups

No I think the name calling and net cops are the ones who drive
people away, so keep it up and you will get your wish. In the
meantime just be cool and the thread will die a natural
death, they always do...

## 1270. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 18:30:20 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <agfdc4hk3n57i4gst7sm48uv4k8mttu39t@4ax.com>
Source record: 4457

"JB" <nospam@goofball.net> wrote:

>So the word "obsolete" is a subjective word reflecting your own usage.

Yes the word obsolete is very subjective. And it "obsolete" means different
things to different people. My posts here are my *opinion*. You have stated
that you have a different opinion. We have a discussion. That makes
it interesting and is why we are all here.

>Head copy is the only way to pounce on the contact before they QSY or
>someone else picks them up.

Yes for contest or DX operation. But for relaxing CW operation a
computer can do just fine. Some of my recent QSOs
have been with people who admittedly don't know CW and
are using a computer. I don't mind as we are both having
fun.

>It means YOUR BRAIN might not be obsolete after all!!

My brain is becoming very obsolete in recent years,
very scary...

# 1271. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 18:42:27 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <vpGdnXcyrOreX1vVnZ2dnUVZ_qrinZ2d@posted.cpinternet>
Source record: 4458

Michael Black wrote:

> On Mon, 8 Sep 2008, AJ Lake wrote:
>>
>> I changed the header subject to better reflect the discussion.

> If it's off-topic enough that you know to change the subject,
> then take it elsewhere.

<snip>

> And surely you and the other carpetbaggers
> would fit in better there, since you don't have anything to say
> about building radios.

Au contraire mon ami; most of the replies include descriptions of homebrew efforts relating to license classes and FWIW, I recognize most of the respondents as previous posters to this N.G. I for one have appreciated this discussion.

Regards,

Michael

# 1272. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 20:48:38 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <O6KdnRuPraWwfFvVnZ2dnUVZ_uWdnZ2d@comcast.com>
Source record: 4459

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:abedc4dl2dtduufclno30koh69srg5gmvn@4ax.com...
> Michael Black <et472@ncf.ca> wrote:
>

[snip]

>>There is rec.radio.amateur.policy
>
> Right. The kooks have taken over rrap with their profanity and
> other sick stuff. That was a fun group some years back
>
>>It's idiots like you that kill the newsgroups
>
> No I think the name calling and net cops are the ones who drive
> people away, so keep it up and you will get your wish. In the
> meantime just be cool and the thread will die a natural
> death, they always do...

rec.radio.amateur.policy was destroyed almost single-handedly by one
individual. Although others made it somewhat of a sewer, he put it into the
coffin and drove the nails and buried it. I've deleted that newsgroup from
my list entirely as it is completely useless now.

# 1273. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-09 23:50:37 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B14BFB0AE0B42MDWN@194.177.96.78>
Source record: 4460

Ok, this should work. http://tinyurl.com/6at4zu

> I mean the primary of this thing uses litz wire that looks like 10AWG
> wire about 13 turns around the core
> and they using 4 strands of 28 AWG to run the filament
> The HV secondary measures only 6.8 ohms DC.

I'm glad you mentioned that. If the core is ferrite and it's gapped, then the litz makes sense to reduce eddy current losses from the fringing field sprayed out of the gap. A gapped core would also most likely mean it is a flyback.

It really is amazing the power density SMPS can achieve. Though the overload capacity available from big hunks of iron and copper isn't to be discounted lightly. I had to pick up a 10KW autotransformer today. I don't know how much it weighed but I'd guess 130lbs, or there about. The two transformers in the 10KW SMPS are maybe four pounds total.

# 1274. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 06:19:13 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <ia6dnVE3dr9G-1rVnZ2dnUVZ_vOdnZ2d@giganews.com>
Source record: 4461

Tim Shoppa wrote:
[snip]
The controversy in the 70's was the Technician license, a ticket that required no code, as a way to get some CB'ers to take notice. I myself came to ham radio in the 70's but had no interest in anything having to do with Technician privileges. I know many other hams who did come in that way in the 70's, 80's, etc.

Tim N3QE

The original Technician license required passing of a 5wpm receiving & sending Morse test.

73,
Bryan WA7PRC

# 1275. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 10:54:02 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <GvmdnTUQnMjWOlrVnZ2dnUVZ_tHinZ2d@bright.net>
Source record: 4462

Bryan wrote:
> Tim Shoppa wrote:
> [snip]
> The controversy in the 70's was the Technician license, a ticket that
> required no code, as a way to get some CB'ers to take notice. I myself
> came to ham radio in the 70's but had no interest in anything having
> to do with Technician privileges. I know many other hams who did come
> in that way in the 70's, 80's, etc.
>
> Tim N3QE
>
> The original Technician license required passing of a 5wpm receiving &
> sending Morse test.
>
> 73,
> Bryan WA7PRC
>
>

I concur from experience in 1982 when I got my Tech license. I had to take the 5WPM code test at the FCC office. We had the same HF privileges as Novices and could operate on any frequency above 50.000 MHz. I can't recall, but I "THINK" the first code-free Tech licenses did not have HF privileges. Now that there is no code requirement for any class, I think Techs have some HF privileges again...a bit confusing ;)

Scott
N0EDV

# 1276. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 12:04:43 UTC
From: The Black Goat With A Thousand Young <ancient_ones@shoggoths.rule>
Message-ID: <pan.2008.09.10.12.04.24.72621@ia.ia.nngh.yog.sothoth.neblod.zin>
Source record: 4463
Cross-posted to: alt.usenet.kooks,rec.radio.shortwave,rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.homebrew

On Sun, 03 Aug 2008 14:19:24 -0700, KnobGobblerMorkie@Mail2Princess.Com,
of the Mark Morgan Fan Club, fixed me with a beady eye, and foamed wildly:
> On Jul 30, 7:36 pm, "Tio Pedro" wrote:
>> "Telstar Electronics" wrote
>> This
>>
>> DF4ZS is a clipping type processor... nothing like the VoiceMax audio
>> compressor.
>>
>> That is true. SSB RF clipping is proven to deliver an honest 6 dB
>> improvement.
>
>
>
> Remember way back when this was posted? Dam..... I wish YZ the great
> one was still posting here!!
>
> <PROCEEDING> 98-143
> <DATE> 11.27.98
> <NAME> STEVEN JAMES ROBESON
> <ADDRESS1> HCR65 BOX 572
> <ADDRESS2> POB 2103
> <CITY> DUNLAP
> <STATE> TN
> <ZIP> 37327
> <LAW FIRM> NONE
> <ATTORNEY> NONE
> <FILE NUMBER> NONE
> <DOCUMENT-TYPE> CO
> <CONFIDENTIAL> N
> <PHONE NUMBER> (???) -???-????
> <DESCRIPTION> Comments on WT 98-143
> <NOTIFY> erlpnk...@aol.com
> <TEXT>
>
>
>
>
> To the Members of the Commission Assembled:
>
>
> I am Steven Robeson. I have been a licensee in the Amateur Radio

> Service
> since 1972 and am presently the licensee of Amateur Radio Station K4YZ
> and hold
> an Amateur Extra Class Operators license. I comment to you today on the
> matter
> of WT 98-143.
>
>
> There can be no doubt that there has been quantum leaps in the
> field of
> radiocommunication since the last major rewrite of Part 97. This
> includes the
> "Incentive Licensing" system that was implemented in the late 1960's. It
> is
> clearly time to change the system.
>
>
> The Commission has solicited comments relative to that
> circumstance, and I
> hope the following will be considered in that act.
>
>
> First of all, I would like to wholeheartedly approve of the
> concept of
> reducing the number of Amateur License classes from six to four. There
> is much
> confusion as to "who's who" as it is now, and a reduction in the
> licensing process would alleviate that disparity. As such, I envision
> the following as
> being appropriate for said restructuring:
>
>
> Amateur Class D: The Amateur Class D license would become the de
> facto
> "entry class" license for the Amateur Service. In light of the grossly
> decreased demand for the Novice License and reduced useage of the sub-
> bands
> allocated for thier use, I would deactivate it as the "entry class"
> licenese.
> The Class D License would for all intents and purposes be the same as
> the current "Codeless Technician" class license. The examination for
> this license
> would remove questions pertaining to HF (1.8 to 30 MHZ) theory and
> operation,
> and be strictly limited to matters pertaining to VHF/UHF theory and
> operation,
> regulatory matters and Amateur practice. All Amateur privileges above
> 30 MHZ
> would be conveyed to the successful applicant.

>
>
> Amateur Class C: The Class C license would be the entry level
> license for
> operation on the HF spectrum. It would require the successful applicant
> either
> hold a Class D license, or successfully complete the Class D examination
> in
> addition to an examination on basic HF theory, propagation and practice.
> It
> would also require an examination in proficiency in the sending and
> receiving
> of Morse Code at a speed of not more than 5 (five) words per minute.
> Persons
> presently holding a Novice Class License or Technician Plus license
> would be
> grandfathered into this class of license, except that they would be
> required to
> take a 20 question open book examination at a VE Testing Session on the
> privileges and restrictions of the Class C License prior to utilizing
> those
> privileges. Allocations would include those presently enjoyed by the
> Amateur
> General Class licensee except for operation of the 160, 30, 17 and 12
> meter
> bands.
>
>
> Class B: The Class B license would incorporate the present
> Amateur
> General and Amateur Advanced license. All amateur priviledges as are
> presently
> enjoyed by the Amateur Advanced would be authorized with Amateur
> General's being grandfathered into Class B. New licensee's would be
> required to pass a
> written examination on advanced radio frequency technology, amateur
> practice,
> regulations and an examination in proficiency in the sending and
> receiving of
> Morse Code at a rate of not more than 12 (twelve) words per minute. This
> would
> be consistent with the present CEPT program, which the United States is
> presently negotiating membership in. Additional frequency allocations
> would be
> authorized by the "refarming" of the subbands presently allocated to the
> Novice
> Class, and divided with the Class A license.
>
>

> Class A: The Amateur Class A would convey all Amateur operating
> privileges to the successfull applicant. Present subband authorizations
> enjoyed in the "CW" bands would be unchanged and new exclusive phone
> allocations for the Class A would be "refarmed" from the deactivated
> Novice
> license and by rellocating from the "high" end of present CW allocations
> where
> operation is sparse. A quick scanning of those portions of the spectrum
> will
> demonstrate that minimal use is made of this portion of the authorized
> allocations and reallocation to "phone" or other "wideband" emission
> types is
> reasonable.
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> The Class A applicant will demonstrate advance/expert level
> knowledge of
> RF technology and Amateur practice. No additional Morse Code
> examination would
> be required.
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> To further simplify the administrative process of the Commission,
> I would
> discontinue the present "sequential" callsign system. Upon successful
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> of the requirements for an Amateur Examination, the applicant would be
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> "2 by 3" callsign (ie: KA4AAA) by the Commission. Those wishing to
> specifically select a callsign of a particular format would be provided
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> opportunity by the "Vanity" callsign system. The Commission would
> specify those formats of callsigns permitted by class, but it would be
> up to the applicant to chose the desired call, and appropriate fee paid
> for the privilege
> of obtaining said call.
>
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> As for the occassionally emotional debate on the retention of the
> Morse
> Code requirement, I am steadfastly in favor of retention of the use of
> Morse
> Code and demonstration of it's use for the Amateur Service. Among it's
> prouder
> traditions has been the Amateur's ability to communicate across
> international
> boarders and foster communication between citizens in countries which
> may not
> have a common language in which to conduct that communication. Morse

> Code is
> the "common denominator" in international communications and should be
> retained.
>
>
> As for the arguement that more efficient or reliable methods of
> communication exist, it is a time proven fact that the simplicity of
> Morse Code
> systems has allowed us to communicate with portions of the world that
> cannot
> enjoy the same level of access to technology that we as American's
> enjoy.
>
>
> And to echo the comments of another commentor to these
> proceedings, I
> would like to express my concern over the decline of the overall
> technical skill and knowledge of the average Amateur. I firmly believe
> that this is the
> direct result of the publishing of Amateur Radio question and answer
> test pools
> in the public domain. I feel it is as rediculous a concept as for our
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> to prepublish the questions and answers of mid-terms and finals. Closing
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> pools except to the VEC's, the Commission, and an independent oversight
> committee approved by the Commission would go a long way towards
> ensuring that
> the successful applicant has a minimal and sufficient retention of the
> requisite knowledge for an Amateur license.
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> Lastly, I would consider all of this for naught if the Commission
> were to
> fail to make a determined and on-going effort to enforce the rules and
> regulations as they pertain to the operation of Amatuer Radio Stations.
> It is
> an embarrasment that we are as frail as any other subset of human
> society, and
> we too have our share of ner'-do-wells and rabble-rousers. But unlike a
> local
> "protest" or civil disturbances in one localized area,
> radiocommunication has
> the potential of causing a disruption over a massive, if not world- wide
> area,
> even when that disruption is perpetrated by only a few "rotten apples".
> The
> Amateur Service still prides itself on it's own "self policing"
> activities, and

> this activity is unprecedented in any other Service under the
> Commission's domain, but only so much can be accomplished short of
> vigilanteism. The Commission's assurance that they will enforce these
> regulations and back it
> up with action will be the one greatest action the Commission could
> take.
>
>
> Respectfully Submitted,
>
>
> /s/ Steven James Robeson, LPN
> Amateur Radio Staton K4YZ

Wow, guess it must really suck to be Steve, or anyone who agrees with him
on the Morse code issue. Or you.

--
_____
Hail Eris! Cthulhu fhtagn! mhm 29x21; Top Asshole #3; Lits Slut #16
Chas. E. Pemberton; Most Hated Usenetizen of All Time #13
Gutter Chix0r #17; BowTie's Spuriously Accused Pedo Photographer #4
COOSN-029-06-71069; Usenet Ruiner #5; Official Chung Demon
AUK Psycho & Felon #21; Parrot & Zombie #2
Anonymous Psycho Criminal #18
Pierre Salinger Memorial Hook, Line & Sinker, June 2008
Hammer of Thor, July 2008
"Life size models of Cthulhu, on sale now!"

"Folklore is a 19th century Romanticist movement based on
contemporary popular northern European music."

"The entire concept was concocted by the Brothers Grimm during the
Romanticist literary period and entered the discipline of music in the
following century with the Romanticist musical period after Beethoven."
-- Please send medical bills for any damage to your health caused by the
above two quotes to Agamemnon-Skopianosfaktis. Message-ID:
<UNGdnZVRnLb0fwXVRVnyigA@eclipse.net.uk>

"Kolofilia between a human and another human is as depraved as fucking
animals." -- Agamemnon, poutso kelftis, just plain doesn't like sex,
apparently. Message-ID:
<asqdneLCt_DZ6e_VnZ2dnUVZ8rednZ2d@eclipse.net.uk>

"Roe V Wade has zero bearing on my existence other than it affects it
adversely."
-- Johnny Wentzky never had much truck with "logic". Message-ID:
<V6xNe.27650$XM3.20042@bignews5.bellsouth.net>

"You are the GOD-DAMNED, IGNORANT LIAR here.
Now, that is not me taking the Lord's name in vain."
-- John Wentzky: Living proof of the Death of Irony, in Message-ID:

<jljOe.5348$ZD4.3223@bignews3.bellsouth.net>

"For the most part, morality is universal." -- John "Easily" Shocked

"The whining has just begun." -- John Wentzky, in Message-ID:
<Ie2Qe.8199$wb5.1083@bignews1.bellsouth.net>

"Gay men deserve to die." -- John Wentzky, in Message-ID:
<RSR3f.23691$5l.19933@bignews1.bellsouth.net>

"Laws count, the US Constitution count more, and we need to have judges
on the bench who are going to Carry Out those laws, not Make Law or
Interpret Law." -- John "Easily" Shocked contradicts his own words on
the overriding importance of society's reluctance to accept
homosexuality, in Message-ID: <brIDe.67062$Qo.12613@fed1read01>

"I heard that you are still trespassing in the USA. If it's black, it
refuses to work and it accuses whites of racism. What a joke.
Look at a map and see where Africa is, bitchboy. What is this GOD DAMNED
NIGGERISH ALLEGIANCE YOU HAVE TO TRYING TO GET WHITE PEOPLE TO HAND OFF
OTHER WHITE PEOPLE TO SOMEONE YOU THINK IS NOT AGAINST YOUR CRIMINAL
ALLEGIANCE??????
Too afraid to tell the truth?
WIMPS!
COWARDS!
LIARS!
MILITANT ASSPRICKS!
LOSERS!
FAILED BULLSHITBOYS WHOSE CANDY HAS NO RED ON IT! YOU KNOW IT TO BE TRUE!
I LICKED THE RED OFF YOUR CANDY BECAUSE YOU ARE YOUR ILK HAVEN'T GOT ANY
FURY!
THAT'S WHY YOU CAN'T BEAT ME VIA ANY LAWFUL MEANS WHATSOEVER! YOU'RE A
NAMBY PAMBY ANTI-USA ASSPRICK!" -- Huge pools of MOLTEN WENTZKY are
being found all over the Carolinas, after his reply to Panama Floyd, in
Message-ID: <qiA3k.2556$Xe.1871@bignews1.bellsouth.net>

http://www.screedbomb.info/coosn/
Q: Who is eligible for a COOSN?

A: Kookologists with 10 or more verifiable UV points may exchange these
points for a Cabal Obsidian Order Sombrero Number.

Q: Who is *not* eligible for a COOSN?

A: Certified net.kooks; notorious net.cretins; terminally clueless
fuckwits; previous winners of kook-awards, unless an official pardon has
been granted by the FNVW.

Q: How do I apply for a COOSN?

A: Make a Usenet post to alt.usenet.kooks (crossposting to your favourite
newsgroups is acceptable); to ensure that the FNVW actually sees your
request, try to use either of the following formats for the subject line:

[COOSN Application] Your name (or best known handle) here
[COOSN Request] Your name (or best known handle) here

Please provide a list of 10 UV points - along with verifiable evidence for each point wherever possible.

Q: Can one Kookologist nominate *another* Kookologist for a COOSN?

A: Yes, but the proposer should supply a verifiable list of 10 UV points for the nominee at the time of the nomination. Also, the nominee must accept the nomination before a COOSN is issued.

Q: What happens if my Sombrero Number application is refused by the FNVW?

A: The Office of Darth Bawl is always looking for new candidates. Nuff said.

Q: What are "UV points"?
1. Threats of violence, especially death. (one point per kook)
2. Lists, i.e. *real* lists, not just mentions of two or three names in the same post. One list per kook, unless the lists are clearly meant to serve different purposes.
3. Fanboi sites (one point per kook, not one point per site. Minimum qualification is a whole page about you; pages containing lists don't score extra if the list also appears on Usenet).
4. Fanboi newsgroups (one point per kook, not one point per group)
5. Attempts at real-life contact (e.g. posting phone numbers)
6. Fake awards, revenge nominations etc. (one point per kook)
7. Mentions in a newsgroup FAQ (e.g. soc.men).
8. Being the target of a Kooksuit (one point per kook).

Gerald C. Newton is a wife-beating fuckhead.

# 1277. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 15:09:10 UTC
From: an_old_friend <kb9rqz@gmail.com>
Message-ID: <0c2abfab-2b72-4d77-8a84-a865fdee8c6e@y38g2000hsy.googlegroups.com>
Source record: 4464
Cross-posted to: alt.usenet.kooks,rec.radio.shortwave,rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.homebrew

On Sep 10, 8:04 am, The Black Goat With A Thousand Young
<ancient_o...@shoggoths.rule> wrote:
> On Sun, 03 Aug 2008 14:19:24 -0700, KnobGobblerMor...@Mail2Princess.Com,
> of the Mark Morgan Fan Club, fixed me with a beady eye, and foamed wildly:
>
>
>
> > On Jul 30, 7:36 pm, "Tio Pedro" wrote:
> >> "Telstar Electronics" wrote
> >> This
>
> >> DF4ZS is a clipping type processor... nothing like the VoiceMax audio
> >> compressor.
>
> >> That is true. SSB RF clipping is proven to deliver an honest 6 dB
> >> improvement.
>
> > Remember way back when this was posted? Dam..... I wish  YZ  the great
> > one was still posting here!!
>
> > <PROCEEDING> 98-143
> > <DATE> 11.27.98
> > <NAME> STEVEN JAMES ROBESON
> > <ADDRESS1> HCR65 BOX 572
> > <ADDRESS2> POB 2103
> > <CITY> DUNLAP
> > <STATE> TN
> > <ZIP> 37327
> > <LAW FIRM> NONE
> > <ATTORNEY> NONE
> > <FILE NUMBER> NONE
> > <DOCUMENT-TYPE> CO
> > <CONFIDENTIAL> N
> > <PHONE NUMBER> (???) -???-????
> > <DESCRIPTION> Comments on WT 98-143
> > <NOTIFY> erlpnk...@aol.com
> > <TEXT>
>
> > To the Members of the Commission Assembled:
>
> >      I am Steven Robeson.  I have been a licensee in the Amateur Radio
> > Service
> > since 1972 and am presently the licensee of Amateur Radio Station K4YZ

> > and hold
> > an Amateur Extra Class Operators license.  I comment to you today on the
> > matter
> > of WT 98-143.
>
> >      There can be no doubt that there has been quantum leaps in the
> > field of
> > radiocommunication since the last major rewrite of Part 97.  This
> > includes the
> > "Incentive Licensing" system that was implemented in the late 1960's. It
> > is
> > clearly time to change the system.
>
> >      The Commission has solicited comments relative to that
> > circumstance, and I
> > hope the following will be considered in that act.
>
> >       First of all, I would like to wholeheartedly approve of the
> > concept of
> > reducing the number of Amateur License classes from six to four. There
> > is much
> > confusion as to "who's who" as it is now, and a reduction in the
> > licensing process would alleviate that disparity.  As such, I envision
> > the following as
> > being appropriate for said restructuring:
>
> >      Amateur Class D:  The Amateur Class D license would become the de
> > facto
> > "entry class" license for the Amateur Service.  In light of the grossly
> > decreased demand for the Novice License and reduced useage of the sub-
> > bands
> > allocated for thier use, I would deactivate it as the "entry class"
> > licenese.
> > The Class D License would for all intents and purposes be the same as
> > the current "Codeless Technician" class license.  The examination for
> > this license
> > would remove questions pertaining to HF (1.8 to 30 MHZ) theory and
> > operation,
> > and be strictly limited to matters pertaining to VHF/UHF theory and
> > operation,
> > regulatory matters and Amateur practice.  All Amateur privileges above
> > 30 MHZ
> > would be conveyed to the successful applicant.
>
> >      Amateur Class C:  The Class C license would be the entry level
> > license for
> > operation on the HF spectrum.  It would require the successful applicant
> > either
> > hold a Class D license, or successfully complete the Class D examination
> > in

> > addition to an examination on basic HF theory, propagation and practice.
> > It
> > would also require an examination in proficiency in the sending and
> > receiving
> > of Morse Code at a speed of not more than 5 (five) words per minute.
> > Persons
> > presently holding a Novice Class License or Technician Plus license
> > would be
> > grandfathered into this class of license, except that they would be
> > required to
> > take a 20 question open book examination at a VE Testing Session on the
> > privileges and restrictions of the Class C License prior to utilizing
> > those
> > privileges.  Allocations would include those presently enjoyed by the
> > Amateur
> > General Class licensee except for operation of the 160, 30, 17 and 12
> > meter
> > bands.
>
> >      Class B:  The Class B license would incorporate the present
> > Amateur
> > General and Amateur Advanced license.  All amateur priviledges as are
> > presently
> > enjoyed by the Amateur Advanced would be authorized with Amateur
> > General's being grandfathered into Class B.  New licensee's would be
> > required to pass a
> > written examination on advanced radio frequency technology, amateur
> > practice,
> > regulations and an examination in proficiency in the sending and
> > receiving of
> > Morse Code at a rate of not more than 12 (twelve) words per minute. This
> > would
> > be consistent with the present CEPT program, which the United States is
> > presently negotiating membership in.  Additional frequency allocations
> > would be
> > authorized by the "refarming" of the subbands presently allocated to the
> > Novice
> > Class, and divided with the Class A license.
>
> >      Class A:  The Amateur Class A would convey all Amateur operating
> > privileges to the successfull applicant.  Present subband authorizations
> > enjoyed in the "CW" bands would be unchanged and new exclusive phone
> > allocations for the Class A would be "refarmed" from the deactivated
> > Novice
> > license and by rellocating from the "high" end of present CW allocations
> > where
> > operation is sparse.  A quick scanning of those portions of the spectrum
> > will
> > demonstrate that minimal use is made of this portion of the authorized
> > allocations and reallocation to "phone" or other "wideband" emission

> > types is
> > reasonable.
>
> >      The Class A applicant will demonstrate advance/expert level
> > knowledge of
> > RF technology and Amateur practice.  No additional Morse Code
> > examination would
> > be required.
>
> >      To further simplify the administrative process of the Commission,
> > I would
> > discontinue the present "sequential" callsign system.  Upon successful
> > passing
> > of the requirements for an Amateur Examination, the applicant would be
> > issued a
> > "2 by 3" callsign (ie: KA4AAA) by the Commission.  Those wishing to
> > specifically select a callsign of a particular format would be provided
> > that
> > opportunity by the "Vanity" callsign system.  The Commission would
> > specify those formats of callsigns permitted by class, but it would be
> > up to the applicant to chose the desired call, and appropriate fee paid
> > for the privilege
> > of obtaining said call.
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> >      As for the occassionally emotional debate on the retention of the
> > Morse
> > Code requirement, I am steadfastly in favor of retention of the use of
> > Morse
> > Code and demonstration of it's use for the Amateur Service.  Among it's
> > prouder
> > traditions has been the Amateur's ability to communicate across
> > international
> > boarders and foster communication between citizens in countries which
> > may not
> > have a common language in which to conduct that communication.  Morse
> > Code is
> > the "common denominator" in international communications and should be
> > retained.
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> >      As for the arguement that more efficient or reliable methods of
> > communication exist, it is a time proven fact that the simplicity of
> > Morse Code
> > systems has allowed us to communicate with portions of the world that
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> > enjoy the same level of access to technology that we as American's
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> >      And to echo the comments of another commentor to these
> > proceedings, I
> > would like to express my concern over the decline of the overall

> > technical skill and knowledge of the average Amateur.  I firmly believe
> > that this is the
> > direct result of the publishing of Amateur Radio question and answer
> > test pools
> > in the public domain.  I feel it is as rediculous a concept as for our
> > schools
> > to prepublish the questions and answers of mid-terms and finals. Closing
> > the
> > pools except to the VEC's, the Commission, and an independent oversight
> > committee approved by the Commission would go a long way towards
> > ensuring that
> > the successful applicant has a minimal and sufficient retention of the
> > requisite knowledge for an Amateur license.
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> >      Lastly, I would consider all of this for naught if the Commission
> > were to
> > fail to make a determined and on-going effort to enforce the rules and
> > regulations as they pertain to the operation of Amatuer Radio Stations.
> > It is
> > an embarrasment that we are as frail as any other subset of human
> > society, and
> > we too have our share of ner'-do-wells and rabble-rousers.  But unlike a
> > local
> > "protest" or civil disturbances in one localized area,
> > radiocommunication has
> > the potential of causing a disruption over a massive, if not world- wide
> > area,
> > even when that disruption is perpetrated by only a few "rotten apples".
> > The
> > Amateur Service still prides itself on it's own "self policing"
> > activities, and
> > this activity is unprecedented in any other Service under the
> > Commission's domain, but only so much can be accomplished short of
> > vigilanteism. The Commission's assurance that they will enforce these
> > regulations and back it
> > up with action will be the one greatest action the Commission could
> > take.
>
> > Respectfully Submitted,
>
> > /s/ Steven James Robeson, LPN
> > Amateur Radio Staton K4YZ
>
> Wow, guess it must really suck to be Steve, or anyone who agrees with him
> on the Morse code issue. Or you.

yes he was calling to make the license more complex at a time when the
FCCmade it clear it wanted and was going to have a simpler licensing
scheme

# 1278. Re: info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 15:35:53 UTC
From: confused <confused.30dc066@radiobanter.com>
Message-ID: <confused.30dc066@radiobanter.com>
Source record: 4467

'Andrew VK3BFA[_2_ Wrote:
> ;644769']On Sep 1, 2:05 am, confused confused.3009...@radiobanter.com
> wrote:-
> anyone seen a surface mount part only markings on it are d k 9 z.it's
> on
> a kenwood handheld tranceiver of mine which has burnt out.would
> appreciate any info?
> many thanks
>
> --
> confused-
>
> you need to do it logically and scientifically, which is the basis of
> our hobby.
>
> 1.Get the service manual.
> 2.Get the part no, try Kenwood, if no go, then
> 3.Look at circuit diagram, identify component, replace with similar -
> its unlikely to be critical.
>
> I suspect you are out of your depth at this stage in your amateur
> career, and perhaps it would be wise to seek the help of a local
> technician or knowledgeable amateur - your local club could probably
> help with contact details...
>
> Andrew VK3BFA.

i checked the components characteristics .seemed to be two diodes on
one chip.replaced it with two smt diodes and it works.
thanks for all your advice.

--
confused

# 1279. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 16:59:44 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <79tfc4t34neqfval29spuuaecdfr8sj6gd@4ax.com>
Source record: 4465

Scott <acepilotREMOVE@bloomer.net> wrote:

> I think Techs have some HF privileges again...a bit confusing ;)

I was happy when they gave the Technician Class License HF CW privileges because I thought that it would help the sagging numbers found on the CW bands. Currently they have the same CW privileges as the General Class on 80, 40, and 15M HF bands.

I hang mainly on 80 and 40 CW and average a couple of QSOs a day. To this date I have yet to contact a Tech. (I check QRZ.com when making entries in my computer log.) So at this point it doesn't seem to have increased CW activity as much as I had hoped.

BTW using the internet makes QSOs even more interesting. QRZ.com often has blurbs and photos of the guy you just talked to. Also using Google Maps you can pinpoint his location, and often using Google Streets you can even see a photo of his house. Amazing.

# 1280. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 17:02:16 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <b9ad5b4d-203f-4e00-b480-014a91da3a9c@i76g2000hsf.googlegroups.com>
Source record: 4466

On Sep 9, 7:50 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Ok, this should work. http://tinyurl.com/6at4zu
>
> > I mean the primary of this thing uses litz wire that looks like 10AWG
> > wire about 13 turns around the core
> > and they using 4 strands of 28 AWG to run the filament
> > The HV secondary measures only 6.8 ohms DC.
>
> I'm glad you mentioned that. If the core is ferrite and it's gapped,
> then the litz makes sense to reduce eddy current losses from the
> fringing field sprayed out of the gap. A gapped core would also most
> likely mean it is a flyback.
>
> It really is amazing the power density SMPS can achieve. Though the
> overload capacity available from big hunks of iron and copper isn't
> to be discounted lightly. I had to pick up a 10KW autotransformer
> today. I don't know how much it weighed but I'd guess 130lbs, or
> there about. The two transformers in the 10KW SMPS are maybe four
> pounds total.

Hey mule

Exactly right it is a gapped core. Once I git's a scope on I'll see.

But the voltage doubler they using is full wave doubler. Which means
they taking the positive and negative waves to get 4000 or so volts
DC
Now the positive half they use a .0082 mfd for a filter and the
negative half they use a .0056 mfd filter both at 3000wvdc.
.
They use a damper diode that looks like a varistor, and a hold down
cap is .032 mfd at 500V across the primary.
The power into the primary is filter by an LC just to prevent the RF
getting back into the mains/bridge diodes pack.

73 OM

n8zu

# 1281. Re: VoiceMax Speech Processor...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 19:34:43 UTC
From: an_old_friend <konstans@hotmail.com>
Message-ID: <19755783-8dc6-4198-bad8-e1b17fec5c7f@k13g2000hse.googlegroups.com>
Source record: 4468
Cross-posted to: rec.radio.shortwave,rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.homebrew

On Sep 10, 2:21 pm, Steve <moparho...@hotmail.com> wrote:
> Fred <jesuslo...@thedevil.com> wrote:
> > [Default] On Wed, 10 Sep 2008 08:09:10 -0700 (PDT), in rec.radio.cb
> > you wrote:
>
> > >> Wow, guess it must really suck to be Steve, or anyone who agrees with
> > >> him on the Morse code issue. Or you.
>
> > >yes he was calling to make the license more complex at a time when the
> > >FCCmade it clear it wanted and was going to have a simpler licensing
> > >scheme
>
> > Yeah, it is a shame that they made it too easy to get a ticket and now
> > we have fucktards like Mark on the air.
>
> This is the most accurate post in rrcb today so far. I set filters for
> marks posts, none of them are worth reading anyway. He has destroyed rrap
> so bad that group isn't even worth opening anymore. Think the stupid fuck
> would at least use a spell check, but that's probably above his pay scale.
>
> Perhaps that is his mission, to destroy Usenet text groups. Plonk him and
> leave him to talk to himself.
>
> 73
> Steve.

fred and his freinds can't ignore me sinc ethey have mental illnesses
that make em afraid to even allow exist in the same NG

# 1282. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 20:07:58 UTC
From: JB <nospam@goofball.net>
Message-ID: <yOVxk.799$Dj1.115@trnddc02>
Source record: 4469

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:79tfc4t34neqfval29spuuaecdfr8sj6gd@4ax.com...
> Scott <acepilotREMOVE@bloomer.net> wrote:
>
> > I think Techs have some HF privileges again...a bit confusing ;)
>
> I was happy when they gave the Technician Class License HF CW privileges
> because I thought that it would help the sagging numbers found on
> the CW bands. Currently they have the same CW privileges as the General
> Class on 80, 40, and 15M HF bands.
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> I hang mainly on 80 and 40 CW and average a couple of QSOs a day. To this
> date I have yet to contact a Tech. (I check QRZ.com when making entries in
> my computer log.) So at this point it doesn't seem to have increased CW
> activity as much as I had hoped.
>
> BTW using the internet makes QSOs even more interesting. QRZ.com often has
> blurbs and photos of the guy you just talked to. Also using Google Maps
you
> can pinpoint his location, and often using Google Streets you can even see
a
> photo of his house. Amazing.

I hate Google Streets. It would seem to be an invasion of privacy for
someone to go around taking pictures. The only use is if you are trying to
buy or sell a house. Or plotting a crime. My PO box is on my license.
Perfectly legal since it gets sent out all over the World

I went from Novice to Advanced, having failed the 20wpm the first time. I
still loved to hang on 40 CW, 2 and 440 FM for years. Then 40 got taken
over by broadcasters. I'm a little bit of everywhere now. With 2 m SSB
becoming popular, I've found cross mode CW/SSB actually works, so more
people find it useful than let on. I had talked to some tech+ on 10 SSB/CW.

## 1283. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 20:11:48 UTC
From: JB <nospam@goofball.net>
Message-ID: <8SVxk.800$Dj1.671@trnddc02>
Source record: 4470

"Michael Black" <et472@ncf.ca> wrote in message
news:Pine.LNX.4.64.0809091344450.12702@darkstar.example.org...
> On Mon, 8 Sep 2008, AJ Lake wrote:
>
> Keep the trash out of here, you and the other carpetbaggers.
>
> Michael VE2BVW

Frequency's in use OM

# 1284. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 21:21:21 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <itcgc4p62rs9mn4p8loj7ac09ckc621oe6@4ax.com>
Source record: 4471

"JB" <nospam@goofball.net> wrote:

>I hate Google Streets. It would seem to be an invasion of privacy for
>someone to go around taking pictures.

Many people feel this way.

>The only use is if you are trying to buy or sell a house.

As I said I use it to see where my contacts live. On occasion I even get to see the tower and/or antennas. I used it scope out my old neighborhoods in the Chicago area where I lived as a kid. Also recently I was recently able to scope out a good parking lot on the beach at Pacific Beach CA (and actually able to read to read the parking sign hours) prior to driving there. So I find lots uses for it.

>My PO box is on my license.

If somebody really wants to find you they can. If you give your call it would be duck soup to find where you live, even using a PO box. But even posting anonymously here on Usenet we can be found. The best advice is not to make anyone mad enough to want devote the resources and time it requires to do it.

> I still loved to hang on 40 CW

Maybe we have QSOed in the past. My computer log goes back to 1990. Unfortunately my paper logs are long gone. Give me your call and I'll check..... ;-)

## 1285. QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-10 22:54:03 UTC
From: John Siegel <johnasiegel@optonline.net>
Message-ID: <48C8500B.9000501@optonline.net>
Source record: 4472

Interesting announcement on the ARRL web site. They have put online an archive of QSTs from 1915 to 2004. If you are a member you can search for and download as a pdf any article without additional cost.

Just for fun I found the article from January 1956 that described my first transmitter.
John

# 1286. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 00:05:20 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B15C22EDBAA12MDWN@194.177.96.78>
Source record: 4473

> Exactly right it is a gapped core. Once I git's a scope on I'll see.
>
> But the voltage doubler they using is full wave doubler. Which means
> they taking the positive and negative waves to get 4000 or so volts
> DC
> Now the positive half they use a .0082 mfd for a filter and the
> negative half they use a .0056 mfd filter both at 3000wvdc.

my guess is the quasi-push pull output is due to the leakage energy recovery circuit. HV flyback transformers usually have very high leakage inductance (the part of the magnetizng inductance not coupled to the secondary is leakage inductance) because distance between windings is a major cause of poor coupling and you need distance for isolation.

The leakage energy sloshes about in the primary causing all sorts of mischief. This circuit recovers it and dumps it back into the primary. It's unusual since the leakage energy is usually dumped back into the bulk storage capacitor on the primary side if it's recovered by a clamp winding or active clamp circuit.

A soft switching topology often uses the leakage inductance to reduce transistion losses in the switch. Sometimes a discrete inductor is added in series with the transformer primary to add to it. Another bonus for the lousy coupling of the HV flyback transformer... no discrete inductor needed. I think of this as electronic ju-jitsu.

The energy per half cycle (on the secondary) won't be equal so juggling the capacitor values helps equalize the voltage stress.

Eh! I might be completely wrong. Simulating it would be the thing but it's too much like work work and I'd need the transformer parameters.

At least that's how I think it works... Please let me know when you've scoped the waveforms.

# 1287. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 02:20:57 UTC
From: jimmie68@gmail.com
Message-ID: <75159065-a969-4ed4-8747-7474f6636f76@d1g2000hsg.googlegroups.com>
Source record: 4474

On Sep 10, 8:05 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> > Exactly right it is a gapped core. Once I git's a scope on I'll see.
>
> > But the voltage doubler they using is full wave doubler. Which means
> > they taking the positive and negative waves  to get 4000 or so volts
> > DC
> > Now the positive half they use a .0082 mfd for a filter and the
> > negative half they use a .0056 mfd filter both at 3000wvdc.
>
> my guess is the quasi-push pull output is due to the leakage energy
> recovery circuit.  HV flyback transformers usually have very high
> leakage inductance (the part of the magnetizng inductance not coupled
> to the secondary is leakage inductance) because distance between
> windings is a major cause of poor coupling and you need distance for
> isolation.
>
> The leakage energy sloshes about in the primary causing all sorts of
> mischief.  This circuit recovers it and dumps it back into the primary.
> It's unusual since the leakage energy is usually dumped back into the
> bulk storage capacitor on the primary side if it's recovered by a clamp
> winding or active clamp circuit.
>
> A soft switching topology often uses the leakage inductance to reduce
> transistion losses in  the switch.  Sometimes a discrete inductor is
> added in series with the transformer primary to add to it.  Another
> bonus for the lousy coupling of the HV flyback transformer... no
> discrete inductor needed.  I think of this as electronic ju-jitsu.
>
> The energy per half cycle (on the secondary) won't be equal so juggling
> the capacitor values helps equalize the voltage stress.
>
> Eh!  I might be completely wrong.  Simulating it would be the thing
> but it's too much like work work and I'd need the transformer parameters.
>
> At least that's how I think it works... Please let me know when you've
> scoped the waveforms.

The schematic I sent to msg actually refers to it as a flyback
circuit.
I am guessing one of the IGBTs is being used as a damper.

Jimmie

Jimmie

# 1288. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 03:08:30 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <9fb5ff71-79cb-4474-b5d4-f8a73d6a26a9@f63g2000hsf.googlegroups.com>
Source record: 4475

On Sep 10, 8:05 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> my guess is the quasi-push pull output is due to the leakage energy
> recovery circuit.  HV flyback transformers usually have very high
> leakage inductance (the part of the magnetizng inductance not coupled
> to the secondary is leakage inductance) because distance between
> windings is a major cause of poor coupling and you need distance for
> isolation.

Exactly right I was in a hurry to get off to work and cut out the part
about the Damper diode and hold down capacitor. So yeah the diode
which looks like a varistor and may very well be a varistor, is the
push pull switch shorting out the induced trailing edge energy of the
IGBT. They use a .032 mfd across the primary along with the damper.
So the damper is switching on after the IGBT turned is off.

> At least that's how I think it works... Please let me know when you've
> scoped the waveforms.

Hopefully on the day 911, I get this powered up with low voltage. .
VK3HZ waveforms were at 50 hz trace sweep frequency so you couldn't
see the 30khz waveform.

73 OM
n8zu

# 1289. Re: QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 08:28:07 UTC
From: steve H <usgzhfckxcguhsevjerxsicfcnvzcztymnvbvinscmfwghvzvczdcbxvssdfvcygfcbhtcfghbytrdfcgvhuytfrgvhytfrgvhytfghytrfghygtyfgvhygtfg@tfif.co.uk>
Message-ID: <48c8d698_3@mk-nntp-2.news.uk.tiscali.com>
Source record: 4476

John Siegel wrote:
> Interesting announcement on the ARRL web site. They have put online an
> archive of QSTs from 1915 to 2004. If you are a member you can search
> for and download as a pdf any article without additional cost.
>
> Just for fun I found the article from January 1956 that described my
> first transmitter.
> John
>
Do you have a link to it? I can't find it on the site.

Steve H

# 1290. Re: QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 11:31:28 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <48c90206$0$7316$607ed4bc@cv.net>
Source record: 4477

> Do you have a link to it? I can't find it on the site.

Steve - There is a link within a news story on the first page. Way down near the bottom.

Rick

# 1291. Re: QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 12:46:23 UTC
From: steve H <usgzhfckxcguhsevjerxsicfcnvzcztymnvbvinscmfwghvzvczdcbxvssdfvcygfcbhtcfghbytrdfcgvhuytfrgvhytfrgvhytfghytrfghygtyfgvhygtfg@tfif.co.uk>
Message-ID: <48c91322$1_4@mk-nntp-2.news.uk.tiscali.com>
Source record: 4478

Rick wrote:
>> Do you have a link to it? I can't find it on the site.
>
>
> Steve - There is a link within a news story on the first page. Way down
> near the bottom.
>
> Rick
>
>
Many thanks. I build a lot of valve kit and QST was full of ideas in
the 50's and 60's. I buy back issues when I see them at hamfests but
you don't often see them in the UK.

steve h

# 1292. Re: QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 13:51:32 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <067a4d7e-1751-43a1-9575-9ea0c9f8e0e3@b1g2000hsg.googlegroups.com>
Source record: 4479

On Sep 10, 6:54 pm, John Siegel <johnasie...@optonline.net> wrote:
> Interesting announcement on the ARRL web site.  They have put online an
> archive of QSTs from 1915 to 2004. If you are a member you can search
> for and download as a pdf any article without additional cost.
>
> Just for fun I found the article from January 1956 that described my
> first transmitter.

Cool, way cool!

I have roughly several hundred often moldy issues of QST's on my
shelves from the 40's through the 70's. Maybe the basement will smell
a little better now that I don't need them :-).

Having QEX online would be nice too... (hint, hint).

The sure way the ARRL can keep me as a member is to continue offering
this service to their members!

Tim N3QE

# 1293. Re: QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 14:48:47 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrngcibuf.2ni2.bit-bucket@shell.config.com>
Source record: 4480

On Wed, 10 Sep 2008 18:54:03 -0400, John Siegel wrote:
> Interesting announcement on the ARRL web site. They have put online an
> archive of QSTs from 1915 to 2004. If you are a member you can search
> for and download as a pdf any article without additional cost.
>
> Just for fun I found the article from January 1956 that described my
> first transmitter.

Did anyone get "QST: Annual Index" to pull up the annual index for any issue of QST? Returns nothing here _and_ it also highlights (selects) the "QEX: Annual Index" and "Ham Radio: Annual Index" entries.

And, why no "QST: Table of Contents"!!

It's easy to trawl through various _columns_ in QST. But, unless you have a pretty good idea what the title is, or who the author was, there's no easy way to locate a feature article.

I would assume the _intent_ of putting all this up on the ARRL web site is for ARRL Members to find material in old issues of QST. Why doesn't the _implementation__ demonstrate this? At least give us the Annual Index(es) and the TOCs.

Jonesy
--
Marvin L Jones | jonz | W3DHJ | linux
38.24N 104.55W | @ config.com | Jonesy | OS/2
* Killfiling google & XXXXbanter.com: jonz.net/ng.htm

# 1294. Re: QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 14:57:52 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <b6cic4h8p1v648d34sfuklfrde4qt47tcd@4ax.com>
Source record: 4481

On 11 Sep 2008 14:48:47 GMT, Allodoxaphobia <bit-bucket@config.com>
wrote:

>On Wed, 10 Sep 2008 18:54:03 -0400, John Siegel wrote:
>> Interesting announcement on the ARRL web site. They have put online an
>> archive of QSTs from 1915 to 2004. If you are a member you can search
>> for and download as a pdf any article without additional cost.
>>
>> Just for fun I found the article from January 1956 that described my
>> first transmitter.
>
>Did anyone get "QST: Annual Index" to pull up the annual index for any
>issue of QST? Returns nothing here _and_ it also highlights (selects)
>the "QEX: Annual Index" and "Ham Radio: Annual Index" entries.
>
>And, why no "QST: Table of Contents"!!
>
>It's easy to trawl through various _columns_ in QST. But, unless you
>have a pretty good idea what the title is, or who the author was,
>there's no easy way to locate a feature article.
>
>I would assume the _intent_ of putting all this up on the ARRL web site
>is for ARRL Members to find material in old issues of QST. Why doesn't
>the _implementation__ demonstrate this? At least give us the Annual
>Index(es) and the TOCs.
>
I have about 80 years worth of the QST on CD collection. The tool I
use is the ARRL Periodicals Archive and Search
http://www.arrl.org/members-only/qqnsearch.html

73 de n4jvp

## 1295. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 17:58:08 UTC
From: JB <nospam@goofball.net>
Message-ID: <Q_cyk.60$N5.12@nwrddc01.gnilink.net>
Source record: 4482

> If somebody really wants to find you they can. If you give your call it...

Yes this is true, but you don't have to make it easy for them. They will go after the easy meat first.

The best bet is not to leave anything the robots can parse and dump into a searchable database. Then nut cases and spam machines with lots of time on their hands will use someone else. I learned my lesson 10 years ago from using my callsign for my screen name and winding up with hundreds of people from all over the world sending me hate mail because some veeagra and sealis salesmen were spooffing my address.

# 1296. Re: QST Archive

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 19:12:19 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <44fc7ece-87a4-4c5d-bb5c-0adb4ba9bb2b@z66g2000hsc.googlegroups.com>
Source record: 4483

On Sep 11, 10:48 am, Allodoxaphobia <bit-buc...@config.com> wrote:
> Did anyone get "QST: Annual Index" to pull up the annual index for any
> issue of QST?  Returns nothing here _and_ it also highlights (selects)
> the "QEX: Annual Index" and "Ham Radio: Annual Index" entries.
>
> And, why no "QST: Table of Contents"!!
>
> It's easy to trawl through various _columns_ in QST.  But, unless you
> have a pretty good idea what the title is, or who the author was,
> there's no easy way to locate a feature article.
>
> I would assume the _intent_ of putting all this up on the ARRL web site
> is for ARRL Members to find material in old issues of QST.  Why doesn't
> the _implementation__ demonstrate this?  At least give us the Annual
> Index(es) and the TOCs.

If you want an annual index, you type in the year, select the
magazine, set the month to any, and it lists all the articles for that
year.

About locating a feature article... depending on the nature of the
article there are keywords like "Construction Project",
"Modification", "Homebrew", "QRP", In between title search and
keyword search and author search, I've been able to find all the
articles that I've been looking for.

Could they improve the searching ability? Oh yeah, sure. I have a
freaking hardware-store orgasm every time I go to http://www.mcmaster.com/
just give it a try, I can start typing "Gear Puller" in the search box
and even before I finish the word puller, I have the catalog page in
front of me with pictures of all the relevant dimensions and types.
That's really good! I've used a lot of web-based search utilities and
I'd rank the ARRL QST online index/search engine as above average but
nowhere near the best.

Tim. N3QE

## 1297. nxp_rf_manual_11th_edition available

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 20:36:39 UTC
From: "Gian, I7SWX" <i7swx@yahoo.com>
Message-ID: <81e460a2-0a53-49c0-9680-401c00a11595@m44g2000hsc.googlegroups.com>
Source record: 4484

Hi All,

NXP have just made available their ”RF MANUAL 11th Edition”

You may download the file visiting:

http://www.nxp.com/acrobat_download/other/discretes/nxp_rf_manual_11th_edition.pdf

Enjoy the reading and good download

73

Gian
I7SWX

# 1298. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-11 22:35:47 UTC
From: jimmie68@gmail.com
Message-ID: <ca9b70ed-a605-48d1-a879-e3b969422238@s50g2000hsb.googlegroups.com>
Source record: 4485

On Sep 1, 7:48 pm, raypsi <RBorow...@gmail.com> wrote:
> On Aug 28, 8:39 pm, jimmi...@gmail.com wrote:
>
>
>
>
>
>
> > On Aug 28, 4:02 pm, jimmi...@gmail.com wrote:
>
> > > On Aug 27, 12:40 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > > finally came across an article by VK3HZ that describes how to make a
> > > > microwave oven inverter PS work, as a stand alone supply.
> > > > the link is:www.users.bigpond.net.au/dwsmith/hv_inverter.pdf
>
> > > > It's only regulated from the primary side. And you can make it put out
> > > > anything from 2000 to 4000 VDC. but at 1300 watts.
>
> > > > So all I have to do is load down the primary to fake out the regulator
> > > > into seeing 1300 watts, Or run class A.
>
> > > > The output or the input still has to be filtered
>
> > > > There's an opto coupler that has to see a 110hz square wave, according
> > > > to VK3HZ, that'll keep the supply running full tilt as long as there
> > > > is power supplied to the inverter.
>
> > > > 73
> > > > n8zu
>
> > > If the circuit can be driven from 555 osc perhaps the pulse width can
> > > be controlled from a feedback voltage taken off the output of the
> > > power supply.
> > > I am thinking adding a small winding to the transformer rectifying and
> > > filtering it and supplying this back to control the pulse width of
> > > your osc.
>
> > > JImmie- Hide quoted text -
>
> > > - Show quoted text -
>
> > I was the OP of the origonal thread about the inverter power supplies.
> > I was actually more interested in learning about the design of the
> > power supplies so I could possibly build one from scratch. With the

> > right information this may be easier to do than to modify one from a
> > microwave oven. I am very grateful for the information. I have a
> > couple of the Panasonic power supplies unfortunately they dont work
> > but maybe I can repair them now that I have a schematic. Information
> > on the transformer would be a good thing to have as I am sure it could
> > be optimized for the desired output voltage and current needed for an
> > amateur amplifier.
>
> > With the current transformer on the front end I am guessing this may
> > be the feedback path for regulation. That is to say the power supply
> > is being controlled by the amount of current that is being drawn on
> > the input side of the power supply. If this is the case maybe this
> > input can be taken of the out put of the power supply and then the
> > supply could be voltage regulated instead of being power regulated.
>
> > Jimmie- Hide quoted text -
>
> > - Show quoted text -
>
> Hey Jimmie
>
> I suppose  that you could use the duty cycle feature of this supply to
> control the output
> but I'd need a bank of 450WVDC caps to supply filtering.
> So say the power of the amp drops: the supply will compensate by
> increasing the voltage
> But with feedback I could drop the duty cycle thru the opto coupled
> input. Thus causing a drop in voltage which the filter would handle.
> By running the inverter at another lower duty cycle I can control the
> output voltage.
>
> I would suggest at least a bank of 16, 450WVDC for a little head room.
> Plus that would take out the 120 cycle ripple.
>
> 73
>
> n8zu- Hide quoted text -
>
> - Show quoted text -

The mains rectifier could use some filtering too. Im thinking using
the caps out of some old PC power supplies

Jimmie

# 1299. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-12 14:54:30 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B1764CBF94AE2MDWN@194.177.96.78>
Source record: 4486

jimmie68@gmail.com wrote in
news:ca9b70ed-a605-48d1-a879-e3b969422238@s50g2000hsb.googlegroups.com:

> The mains rectifier could use some filtering too. Im thinking using
> the caps out of some old PC power supplies
>
> Jimmie

Lots of good parts in a PC power supply...

Use the NTC inrush limiter resistors from the old PC supply
too so the caps don't pound the snot out of the on-off switch
and line recifier.

# 1300. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-12 16:08:29 UTC
From: jimmie68@gmail.com
Message-ID: <443b04c6-c18f-43b2-b709-871b0aae3cbb@k37g2000hsf.googlegroups.com>
Source record: 4487

On Sep 12, 10:54 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> jimmi...@gmail.com wrote
innews:ca9b70ed-a605-48d1-a879-e3b969422238@s50g2000hsb.googlegroups.com:
>
> > The mains rectifier could use some filtering too. Im thinking using
> > the caps out of some old PC power supplies
>
> > Jimmie
>
> Lots of good parts in a PC power supply...
>
> Use the NTC inrush limiter resistors from the old PC supply
> too so the caps don't pound the snot out of the on-off switch
> and line recifier.

Yeah, I was planning on using pretty much the whole input section to the PC power supply. The one I am looking at I think I can cut out the whole circuit with a coping saw and mount it on some standoffs. This would put the rectifiers and caps on a seperate little chassis and I wont have to shoehorn in the 'lytics on to the inverter board.

I was noticing that the schematic for the 120VAC uwave inverters is pretty much the same as the 240VAC inverter. I was expecting mains input to be different. What I was expecting was a voltage doubler on the 120VAC board since the 240VAC board used a bridge. This would mean that the inverter section is designed to run off of anything from 150VDC to 300VDC . I need to take a closer look at just what are the differences in the 120 and 240 inverters.

Jimmie

Jimmie

# 1301. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-13 01:49:55 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B17D3EB150302MDWN@194.177.96.78>
Source record: 4488

jimmie68@gmail.com wrote in
news:443b04c6-c18f-43b2-b709-871b0aae3cbb@k37g2000hsf.googlegroups.com:

> Yeah, I was planning on using pretty much the whole input section to
> the PC power supply. The one I am looking at I think I can cut out the
> whole circuit with a coping saw and mount it on some standoffs. This
> would put the rectifiers and caps on a seperate little chassis and I
> wont have to shoehorn in the 'lytics on to the inverter board.
>
> I was noticing that the schematic for the 120VAC uwave inverters is
> pretty much the same as the 240VAC inverter. I was expecting mains
> input to be different. What I was expecting was a voltage doubler on
> the 120VAC board since the 240VAC board used a bridge. This would mean
> that the inverter section is designed to run off of anything from
> 150VDC to 300VDC . I need to take a closer look at just what are the
> differences in the 120 and 240 inverters.
>
> Jimmie
>
>
> Jimmie
>

Frankenstein style construction. Hopefully you'll be tempted to
shout "IT'S ALIVE!" but without the arcs and sparks.

A 2:1 input range is a piece of cake for a flyback. An 8:1
range isn't unheard of in commodity products. Not being
strictly bounded by the transformer (coupled inductor) turns
ratio can be handy!

There need not be any differences in the power components.
The control parameters important to operation of the oven
might need adjustment though.

That said, optimization for each range could save a few coins.
Make a million ovens or two and it adds up.

# 1302. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-13 02:44:04 UTC
From: jimmie68@gmail.com
Message-ID: <e6f6b189-dbe1-43a8-8307-9ad29d4ba560@m44g2000hsc.googlegroups.com>
Source record: 4489

On Sep 12, 9:49 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> jimmi...@gmail.com wrote
innews:443b04c6-c18f-43b2-b709-871b0aae3cbb@k37g2000hsf.googlegroups.com:
>
>
>
>
>
> > Yeah, I was planning on using pretty much the whole input section to
> > the PC power supply. The one I am looking at I think I can cut out the
> > whole circuit with a coping saw and mount it on some standoffs. This
> > would put the rectifiers and caps on a seperate little chassis and I
> > wont have to shoehorn in the 'lytics on to the inverter board.
>
> > I was noticing that the schematic for the 120VAC uwave inverters is
> > pretty much the same as the 240VAC inverter. I was expecting mains
> > input to be different. What I was expecting was a voltage doubler on
> > the 120VAC board since the 240VAC board used a bridge. This would mean
> > that the inverter section is designed to run off of anything from
> > 150VDC to 300VDC . I need to take a closer look at just what are the
> > differences in the 120 and 240 inverters.
>
> > Jimmie
>
> > Jimmie
>
> Frankenstein style construction.  Hopefully you'll be tempted to
> shout "IT'S ALIVE!" but without the arcs and sparks.
>
> A 2:1 input range is a piece of cake for a flyback.  An 8:1
> range isn't unheard of in commodity products.  Not being
> strictly bounded by the transformer (coupled inductor) turns
> ratio can be handy!
>
> There need not be any differences in the power components.
> The control parameters important to operation of the oven
> might need adjustment though.
>
> That said, optimization for each range could save a few coins.
> Make a million ovens or two and it adds up.- Hide quoted text -
>
> - Show quoted text -

I went through the parts list for each power supply and their are some different part #s for the 120vac
compared to the 240vac unit and the wiring is a little different.

Grumpy, did you want a detailed schematic or did I already give you one?
Send me an email and I will get one to you.

There are part#s for everything. Maybe you could order just the transformer if you wanted.

Jimmie

## 1303. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-13 20:05:15 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <00cfe1fa-5fc8-485f-974b-1d0a5749e025@d77g2000hsb.googlegroups.com>
Source record: 4490

On Sep 11, 1:58 pm, "JB" <nos...@goofball.net> wrote:
> > If somebody really wants to find you they can. If you give your call it...
>
> Yes this is true, but you don't have to make it easy for them.  They will go
> after the easy meat first.
>
> The best bet is not to leave anything the robots can parse and dump into a
> searchable database.  Then nut cases and spam machines with lots of time on
> their hands will use someone else.  I learned my lesson 10 years ago from
> using my callsign for my screen name and winding up with hundreds of people
> from all over the world sending me hate mail because some veeagra and sealis
> salesmen were spooffing my address.

# 1304. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-13 20:23:30 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <93127bb1-7f9e-4810-bf5c-6ac6f564141e@b1g2000hsg.googlegroups.com>
Source record: 4491

oops, the above was just a test...

Anyway, the FAA and the ARRL both became concerned with stagnation in the late 50's in the Amateur Service and as a result began to thrash about for ways to keep the service growing... Incentive licensing, and all the other changes we see moaned about on this topic were the result of an actual good-intentions series of changes... Those who believe in conspiracy will never understand that, but that is their loss.. The one thing we won't see is the status quo... Change is a constant, even in the stodgy ranks of hams... So no code it is - for now - and even after more than a half century on the bands I do not proclaim to foresee the future, other than be able to announce with perfect certainty, the regs will change... If you do not like the regs now, just wait - you won't...

Now having said that, I am currently working on a series of homebrew pulse desulfators for batteries.. I have one that has been blown up a couple of times, but for the moment is upgraded and again working on knocking the sulfate off the plates of a tractor battery... It has 13.2 volt float with 51 volt pulses at a frequency of ~1kc and ~80ms pulse width... I have delivered and in hand (just yesterday) roughly a $100 worth of parts to build another ten units... I have the design for generation II of these that will feature boost and burp charging with ramping of the pulse frequencies...

Next up for gen III will be a 40 volt charger that will be pulse width and frequency agile that will both charge and desulphate simultaneously with a far smaller parts count - the square wave charging pulses doing both actions simultaneously... Today I am beginning the first tests of the devices that will be able to switch 30+ amps at 40 volts...

denny - k8do

# 1305. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-13 23:56:11 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <g8ioc41v6gkaat8g42k59ss8kqk0p8o055@4ax.com>
Source record: 4492

Denny <k8do@mailblocks.com> wrote:

>Incentive licensing,
>and all the other changes we see moaned about on this topic...

My moaning was because of the *unfairness* of the incentive licensing frequency changes. I passed an examination for General and I expected to be able to use those General frequencies. Then they took away half the General frequencies. Even these many years later (even after having regained those lost frequencies) I think it was an unfair change.

Some may moan that the FCC now gives advanced licenses with no code test and modern hams don't have to work as hard for the license as hams in years past. Which is true. And some may moan that people can now get an advanced ham license by memorization without knowing the advanced electronics pretended in the testing. Which is true. But not me because it takes nothing away from privileges already earned.

I have an idea (analogy). How about we institute an Extra Plus license. Forget the code test because it's obsolete. But to make sure that the applicant is really qualified he must pass a *real* electronics/digital test, one that can't be passed by memorization. No answer sheets. At the FCC office like in the old days.

And....to make the license desirable we take away half of the current Extra privileges and give them to the new Extra Plus.

Whoa, talk about moaning...

# 1306. Yaesu FT530 speaker/mic - pinout

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-14 18:22:19 UTC
From: 2E0EJS <2E0EJS.3135acb@radiobanter.com>
Message-ID: <2E0EJS.3135acb@radiobanter.com>
Source record: 4495

Hi all
I have an old FT530 kicking around that I wish to use mobile.
My problem is that I need the pinouts of the jack plugs on the speaker mic so I can emulate these on the plugs of a hands free / remote TX switch mic.
I have seen various bits of info for connections but none that states if I need a DC blocking capacitor or not and what do I connect to earth to make the radio TX (must this be via a resistor?).
I would appreciate any info on this please.....

Neil 2E0EJS / M3SGC

--
2E0EJS

# 1307. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-14 21:56:31 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B19AC552493D2MDWN@194.177.96.78>
Source record: 4493

Thanks for the schematic Jimmie.

The description of the inverter circuit translated by google
says it's both variable frequency pulse and width modulated
er... I think. This Could be critical conduction control.

I couldn't find any mention of the flyback topology but my
Portuguese consists of only a dozen or so words that I learned
while living on the east coast and five of those are unseemly.
---

This Power Supply Reversing receives the 120v or
220v 60Hz AC and provides the entry for the 4000 Vdc
the magnetron tube, before performing the same function
made by the processor and high-capacitor and diode,
high.

. The entry of tension AC120V or 220V 60Hz is retificada
immediately to a voltage DC.

. Voltage DC This will feed a device
IGBT switching required. This device will
chavear On and off for 20 to 40 kHz PWM (Pulse Wide
Modulation) the sign of the microprocessor in the DPC.

. This microprocessor commands the processor high
voltage to amplify and until 2000Vac
3Vac about by the processor.

. Then a circuit of half wave rectifier folder, which
consists of a diode and high voltage capacitors, generate
4000V required for the magnetron.

. The output of the magnetron is always monitored
by the current output of the processor internally
reverse the circuit.

# 1308. Pro-46 scanner mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-14 22:52:25 UTC
From: bprid <bprid.3135acb@radiobanter.com>
Message-ID: <bprid.3135acb@radiobanter.com>
Source record: 4496

I have recently bought a pro-46 scanner on ebay with the hope of doing some modifications to it. One of the modifications i wanted to do was to restore the cellular frequency to it. I did tons of searching and found a few sites that had instructions on how to do it but they were in text and were kind of vague. I got as far as figuring out which resistors to remove but the problem is i dont know where to solder it back onto. I tried a few different locations that i thought were correct but had no sucess. I dont want to just keep trying different places in fear of ruining the scanner. If anyone has any knowledge of this topic and could help i would greatly appreciate it. I can also provide pictures of the board showing what i have taken off and am hoping that maybe someone could take the picture and actually show me exactly where the resistor needs to go. Any help would be appreciated. Thanks

--
bprid

# 1309. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-14 23:06:26 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <qMgzk.34534$vX2.2733@bignews6.bellsouth.net>
Source record: 4494

AJ Lake wrote:
> Denny <k8do@mailblocks.com> wrote:
>
>> Incentive licensing,
>> and all the other changes we see moaned about on this topic...
>
> My moaning was because of the *unfairness* of the incentive licensing
> frequency changes. I passed an examination for General and I expected to be
> able to use those General frequencies. Then they took away half the General
> frequencies. Even these many years later (even after having regained those
> lost frequencies) I think it was an unfair change.
>
> Some may moan that the FCC now gives advanced licenses with no code test and
> modern hams don't have to work as hard for the license as hams in years
> past. Which is true. And some may moan that people can now get an advanced
> ham license by memorization without knowing the advanced electronics
> pretended in the testing. Which is true. But not me because it takes nothing
> away from privileges already earned.
>
> I have an idea (analogy). How about we institute an Extra Plus license.
> Forget the code test because it's obsolete. But to make sure that the
> applicant is really qualified he must pass a *real* electronics/digital
> test, one that can't be passed by memorization. No answer sheets. At the FCC
> office like in the old days.
>
> And....to make the license desirable we take away half of the current Extra
> privileges and give them to the new Extra Plus.
>
> Whoa, talk about moaning...
Well, the current extra class license only adds a small slice of extra
phone and cw bandwidth. I lived without the extra class phone segments
for years. Finally got my extra when the cw requirement went away.

The LACK of incentive plus the 20wpm code was the reason so few upgraded
to the extra class, the advanced class license was good enough.
Actually the extra cw segments were the most prized, so the cw
requirement made sense.

As far as techs are concerned... Well I knew quite a few techs who were
very much into home brew radios. Some of the best two meter (and up)
gear I ever saw was home brewed by those guys.
(state of the art in (1970's) mosfet front rx front ends).

# 1310. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 02:45:36 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <1igrc41dls8pj2jrejt44dpq4h4qdi0o6r@4ax.com>
Source record: 4497

ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote:

>The LACK of incentive plus the 20wpm code was the reason so few upgraded
> to the extra class,

Correct. Before Incentive Licensing there was not much incentive to go above General since there were no additional privileges. Those who did upgrade to Extra did it for the accomplishment.

And since it was a real (no answers supplied) exam before an official FCC examiner it did show accomplishment. Hams of the day often listed it on employment applications alongside their commercial licenses.

>Actually the extra cw segments were the most prized,

Only if you are a CW DXer. And even before the change, by gentlemans agreement the bottom of the CW band was left for DXers and casual CW operation was higher, pretty much like now.

>so the cw requirement made sense

IMO the only justification for the code test (at that time) was for possible emergency use. As an example a ship in distress, since many ships were still using CW at the time. But other than that making a ham take a special code test made about as much sense as making him take a special soldering test. That was finally recognized recently...

>As far as techs are concerned... Well I knew quite a few techs who were
>very much into home brew radios.

As it should be. The Tech license was supposed to be for technical use, not just another operators license. But of course that was a laugh. Most Techs bought their equipment and set up shop on the nearest local repeater...

# 1311. Re: Pro-46 scanner mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 03:02:57 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <sdjrc4t02hhkf364laf2jg8prhoapoiob7@4ax.com>
Source record: 4498

bprid <bprid.3135acb@radiobanter.com> wrote:

>I have recently bought a pro-46 scanner on ebay with the hope of doing
>some modifications to it. One of the modifications i wanted to do was
>to restore the cellular frequency to it.

Hasn't most analog cellular service has been shut down by now? If so your
scanner will receive mostly digital hash on the cellular frequencies. Might
be wasting your time.

# 1312. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 04:57:02 UTC
From: jimmie68@gmail.com
Message-ID: <864a548a-00dd-433a-95a5-3bde58880214@34g2000hsh.googlegroups.com>
Source record: 4499

On Sep 14, 5:56 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Thanks for the schematic Jimmie.
>
> The description of the inverter circuit translated by google
> says it's both variable frequency pulse and width modulated
> er... I think.  This Could be critical conduction control.
>
> I couldn't find any mention of the flyback topology but my
> Portuguese consists of only a dozen or so words that I learned
> while living on the east coast and five of those are unseemly.
> ------------------------------------------------------------
>
> This Power Supply Reversing receives the 120v or
> 220v 60Hz AC and provides the entry for the 4000 Vdc
> the magnetron tube, before performing the same function
> made by the processor and high-capacitor and diode,
> high.
>
> . The entry of tension AC120V or 220V 60Hz is retificada
> immediately to a voltage DC.
>
> . Voltage DC This will feed a device
> IGBT switching required. This device will
> chavear On and off for 20 to 40 kHz PWM (Pulse Wide
> Modulation) the sign of the microprocessor in the DPC.
>
> . This microprocessor commands the processor high
> voltage to amplify and until 2000Vac
> 3Vac about by the processor.
>
> . Then a circuit of half wave rectifier folder, which
> consists of a diode and high voltage capacitors, generate
> 4000V required for the magnetron.
>
> . The output of the magnetron is always monitored
> by the current output of the processor internally
> reverse the circuit.

This thing seems to be regulated primarily by the input CURRENT which would be the same as power and David Smith said in his discription. I think the answer to using it as a power supply is to turn it into a VOLTAGE regulated power supply by taking a voltage sample off of the HV transformer, possible by adding a couple of turns coil to the transformer, and replacing the input from the current transformer with

this one. Naturally the inpit to IINDO may have to be suitably modified also.

I cant remember now where I saw it refered to as a.flyback circuit but it said "FLYBACK" no trouble with translation.

I will look for it tonight.

Jimmie

# 1313. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 05:34:13 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <ct2dnf5o_rodb1DVnZ2dnUVZ_qXinZ2d@posted.cpinternet>
Source record: 4500

AJ Lake wrote:

> ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote:

<snip>
>>As far as techs are concerned... Well I knew quite a few techs who were
>>very much into home brew radios.
>
>
> As it should be. The Tech license was supposed to be for technical use, not
> just another operators license. But of course that was a laugh. Most Techs
> bought their equipment and set up shop on the nearest local repeater...

Experimenter Techs were the norm IMHO before the debacle of license class changes in the late '70s, and anything related to repeaters before then involved significant accomplishment ;) Please don't lump 'new' Techs with 'original' Techs.

BTW, if anyone knows, I'd appreciate knowing what the grace period after expiration was in 1975 (I was told by a field-office rep that my expired Advanced couldn't be renewed and later I was told that I was probably misinformed and was within a grace period, but I could never confirm that fact).

Michael

# 1314. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 06:07:26 UTC
From: AJ Lake <nomail@nomail.com>
Message-ID: <gaktuv$mfc$1@aioe.org>
Source record: 4501

msg wrote:

> Experimenter Techs were the norm IMHO before the debacle of license
> class changes

I may have met one or two Tech experimenters but the only reason they were Tech experimenters and not General or Extra experimenters was they couldn't get their code speed up. Which is why I always thought that the concept of a Tech being an experimenter type license kind of silly.

Heck there is an electronics whiz named Cecil with a web site all about neat antenna ideas of his. He surely fits the experimenter mold. For eons on these newsgroups he said he wouldn't have an Extra if they gave it to him. Absolutely no need said he. But when the code went away guess what. Yup he's an Extra. So IMO the license class has little to do with being an experimenter...

# 1315. Re: Pro-46 scanner mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 08:49:08 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.09.15.08.49.08.280188@localhost.localdomain>
Source record: 4502

On Sun, 14 Sep 2008 20:02:57 -0700, AJ Lake wrote:

> bprid <bprid.3135acb@radiobanter.com> wrote:
>
>>I have recently bought a pro-46 scanner on ebay with the hope of doing
>>some modifications to it. One of the modifications i wanted to do was
>>to restore the cellular frequency to it.
>
> Hasn't most analog cellular service has been shut down by now? If so your
> scanner will receive mostly digital hash on the cellular frequencies. Might
> be wasting your time.

Not everywhere.

There are still analog sites in remote/rugged terrains where digital is
useless... like northern Alberta.

Cheers!

# 1316. FA: Millen Grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 11:04:16 UTC
From: beerbarrel <beerbarrel@cox.net>
Message-ID: <e8ecbff1-f5e0-4975-bbc9-3f94f5da2c91@y38g2000hsy.googlegroups.com>
Source record: 4503

170262279457

# 1317. Re: Yaesu FT530 speaker/mic - pinout

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 14:37:11 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <24adncxMmr6C7lPVnZ2dneKdnZydnZ2d@pipex.net>
Source record: 4504

2E0EJS wrote:
> Hi all
> I have an old FT530 kicking around that I wish to use mobile.
> My problem is that I need the pinouts of the jack plugs on the speaker
> mic so I can emulate these on the plugs of a hands free / remote TX
> switch mic.
> I have seen various bits of info for connections but none that states
> if I need a DC blocking capacitor or not and what do I connect to earth
> to make the radio TX (must this be via a resistor?).
> I would appreciate any info on this
> please.....
==========
Neil 2E0EJS / M3SGC
You can find the manual + circuit diagramme for the FT530 at ;
www.mods.dk Goto Manuals ---> Yaesu ---> FT530

If you are not (financially)contributing to that site you are allowed to
make 1 download per day (24 hrs)

Good Luck

Frank GM0CSZ / KN6WH

# 1318. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 16:33:20 UTC
From: jimmie68@gmail.com
Message-ID: <68d71c04-d7f5-4708-a719-624679f150b6@25g2000hsx.googlegroups.com>
Source record: 4505

On Sep 15, 12:57 am, jimmi...@gmail.com wrote:
> On Sep 14, 5:56 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
>
>
>
>
>
> > Thanks for the schematic Jimmie.
>
> > The description of the inverter circuit translated by google
> > says it's both variable frequency pulse and width modulated
> > er... I think.  This Could be critical conduction control.
>
> > I couldn't find any mention of the flyback topology but my
> > Portuguese consists of only a dozen or so words that I learned
> > while living on the east coast and five of those are unseemly.
> > ----------
>
> > This Power Supply Reversing receives the 120v or
> > 220v 60Hz AC and provides the entry for the 4000 Vdc
> > the magnetron tube, before performing the same function
> > made by the processor and high-capacitor and diode,
> > high.
>
> > . The entry of tension AC120V or 220V 60Hz is retificada
> > immediately to a voltage DC.
>
> > . Voltage DC This will feed a device
> > IGBT switching required. This device will
> > chavear On and off for 20 to 40 kHz PWM (Pulse Wide
> > Modulation) the sign of the microprocessor in the DPC.
>
> > . This microprocessor commands the processor high
> > voltage to amplify and until 2000Vac
> > 3Vac about by the processor.
>
> > . Then a circuit of half wave rectifier folder, which
> > consists of a diode and high voltage capacitors, generate
> > 4000V required for the magnetron.
>
> > . The output of the magnetron is always monitored
> > by the current output of the processor internally
> > reverse the circuit.
>

> This thing seems to be regulated primarily by the input CURRENT which
> would be the same as power and David Smith said in his discription. I
> think the answer to using it as a power supply is to turn it into a
> VOLTAGE regulated power supply by taking a voltage sample off of the
> HV transformer, possible by adding a couple of turns coil to the
> transformer, and replacing the input from the current transformer with
> this one. Naturally the inpit to IINDO may have to be suitably
> modified also.
>
> I cant remember now where I saw it refered to as a.flyback circuit but
> it said "FLYBACK" no trouble with translation.
>
> I will look for it tonight.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

While brows varios inverter circuits I began to wonder how difficult would it be to convert a pulse width modulated power supply into a power supply /AM modulator. Could this be as simple as appling audio on the feedback path between the output and the PWM circuit. Just an idle thought.

Jimmie

# 1319. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 16:57:19 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <yNydnVrnzd1sDlPVnZ2dnUVZ8j2dnZ2d@pipex.net>
Source record: 4506

jimmie68@gmail.com wrote:
snip
>> This thing seems to be regulated primarily by the input CURRENT which
>> would be the same as power and David Smith said in his discription. I
>> think the answer to using it as a power supply is to turn it into a
>> VOLTAGE regulated power supply by taking a voltage sample off of the
>> HV transformer, possible by adding a couple of turns coil to the
>> transformer, and replacing the input from the current transformer with
>> this one. Naturally the inpit to IINDO may have to be suitably
>> modified also.
==========
You might consider taking a voltage sample by 'tapping' a low DC voltage
fraction from the HV output ,putting that into an opamp with adjustable
output.

You can see how this is done in an article in QEX-July.August 1999
,pages 50-55. 'A regulated 2400 V power supply ' by VE6AXW

Frank GM0CSZ / KN6WH

# 1320. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 17:53:47 UTC
From: jimmie68@gmail.com
Message-ID: <18216228-3c5a-4cf2-ac38-ea577aff8f6d@a70g2000hsh.googlegroups.com>
Source record: 4507

On Sep 15, 12:57 pm, Highland Ham <rfbu...@allbands.net> wrote:
> jimmi...@gmail.com wrote:
>
> snip>> This thing seems to be regulated primarily by the input CURRENT which
> >> would be the same as power and David Smith said in his discription. I
> >> think the answer to using it as a power supply is to turn it into a
> >> VOLTAGE regulated power supply by taking a voltage sample off of the
> >> HV transformer, possible by adding a couple of turns coil to the
> >> transformer, and replacing the input from the current transformer with
> >> this one. Naturally the inpit to IINDO may have to be suitably
> >> modified also.
>
> ========================================
> You might consider taking a voltage sample by 'tapping' a low DC voltage
> fraction from the HV output ,putting that into an opamp with adjustable
> output.
>
> You can see how this is done in an article  in QEX-July.August 1999
> ,pages 50-55. 'A regulated 2400 V power supply ' by VE6AXW
>
> Frank  GM0CSZ / KN6WH

Thanks Frank, but I dont have QEX or access

Jimmie

# 1321. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 18:07:42 UTC
From: steve H <usgzhfckxcguhsevjerxsicfcnvzcztymnvbvinscmfwghvzvczdcbxvssdfvcygfcbhtcfghbytrdfcgvhuytfrgvhytfrgvhytfghytrfghygtyfgvhygtfg@tfif.co.uk>
Message-ID: <48cea46f$1_4@mk-nntp-2.news.uk.tiscali.com>
Source record: 4508

jimmie68@gmail.com wrote:
> On Sep 15, 12:57 pm, Highland Ham <rfbu...@allbands.net> wrote:
>> jimmi...@gmail.com wrote:
>>
>> snip>> This thing seems to be regulated primarily by the input CURRENT which
>>>> would be the same as power and David Smith said in his discription. I
>>>> think the answer to using it as a power supply is to turn it into a
>>>> VOLTAGE regulated power supply by taking a voltage sample off of the
>>>> HV transformer, possible by adding a couple of turns coil to the
>>>> transformer, and replacing the input from the current transformer with
>>>> this one. Naturally the inpit to IINDO may have to be suitably
>>>> modified also.
>> ========================================
>> You might consider taking a voltage sample by 'tapping' a low DC voltage
>> fraction from the HV output ,putting that into an opamp with adjustable
>> output.
>>
>> You can see how this is done in an article in QEX-July.August 1999
>> ,pages 50-55. 'A regulated 2400 V power supply ' by VE6AXW
>>
>> Frank GM0CSZ / KN6WH
>
> Thanks Frank, but I dont have QEX or access
>
> Jimmie
http://www.realhamradio.com/hvreg.pdf

for a schematic.

hth

Steve H

# 1322. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 19:03:14 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <dZKdnd86R5fnLFPVnZ2dneKdnZydnZ2d@pipex.net>
Source record: 4509

steve H wrote:
> jimmie68@gmail.com wrote:
>> On Sep 15, 12:57 pm, Highland Ham <rfbu...@allbands.net> wrote:
>>> jimmi...@gmail.com wrote:
>>>
>>> snip>> This thing seems to be regulated primarily by the input
>>> CURRENT which
>>>>> would be the same as power and David Smith said in his discription. I
>>>>> think the answer to using it as a power supply is to turn it into a
>>>>> VOLTAGE regulated power supply by taking a voltage sample off of the
>>>>> HV transformer, possible by adding a couple of turns coil to the
>>>>> transformer, and replacing the input from the current transformer with
>>>>> this one. Naturally the inpit to IINDO may have to be suitably
>>>>> modified also.
>>> ========================================
>>> You might consider taking a voltage sample by 'tapping' a low DC voltage
>>> fraction from the HV output ,putting that into an opamp with adjustable
>>> output.
>>>
>>> You can see how this is done in an article in QEX-July.August 1999
>>> ,pages 50-55. 'A regulated 2400 V power supply ' by VE6AXW
>>>
>>> Frank GM0CSZ / KN6WH
==========================================
>> Thanks Frank, but I dont have QEX or access
>>
>> Jimmie
====================================
> http://www.realhamradio.com/hvreg.pdf
>
> for a schematic.
>
> hth
>
> Steve H
================================
Indeed ,that's the one. Tnx Steve for the interesting URL

Frank GM0CSZ / KN6WH

# 1323. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 21:04:05 UTC
From: jimmie68@gmail.com
Message-ID: <d2624156-5f70-4a0e-a422-5c6a6502a723@m44g2000hsc.googlegroups.com>
Source record: 4510

On Sep 15, 3:03 pm, Highland Ham <rfbu...@allbands.net> wrote:
> steve H wrote:
> > jimmi...@gmail.com wrote:
> >> On Sep 15, 12:57 pm, Highland Ham <rfbu...@allbands.net> wrote:
> >>> jimmi...@gmail.com wrote:
>
> >>> snip>> This thing seems to be regulated primarily by the input
> >>> CURRENT which
> >>>> would be the same as power and David Smith said in his discription. I
> >>>> think the answer to using it as a power supply is to turn it into a
> >>>> VOLTAGE regulated power supply by taking a voltage sample off of the
> >>>> HV transformer, possible by adding a couple of turns coil to the
> >>>> transformer, and replacing the input from the current transformer with
> >>>> this one. Naturally the inpit to IINDO may have to be suitably
> >>>> modified also.
> >>> ==========
> >>> You might consider taking a voltage sample by 'tapping' a low DC voltage
> >>> fraction from the HV output ,putting that into an opamp with adjustable
> >>> output.
>
> >>> You can see how this is done in an article  in QEX-July.August 1999
> >>> ,pages 50-55. 'A regulated 2400 V power supply ' by VE6AXW
>
> >>> Frank  GM0CSZ / KN6WH
>
> ==========>> Thanks Frank, but I dont have QEX or
access
>
> >> Jimmie
>
> ==========>http://www.realhamradio.com/hvreg.pdf
>
> > for a schematic.
>
> > hth
>
> > Steve H
>
> ==========
> Indeed ,that's the one.  Tnx Steve for the interesting URL
>
> Frank   GM0CSZ / KN6WH- Hide quoted text -
>
> - Show quoted text -

Is there any more info on the circuit besides the schematic?

This looks like something I could build and I probably already have most of the parts.

I see it uses SCRs for switching. I guess there is no problem with latchup. I built a 400Hz inverter one time and it seemed to work for a while until one day it latched up on me and smoked. I had been using it to power some selsyn motors. Someone plugged a soldering iron into the inverter and I think it was a little too much load. I guess that is what I get for not labeling my outlets.

Jimmie

# 1324. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 23:14:40 UTC
From: JB <nospam@goofball.net>
Message-ID: <A%Bzk.176$Jw.134@nwrddc02.gnilink.net>
Source record: 4511

> I may have met one or two Tech experimenters but the only reason they were
> Tech experimenters and not General or Extra experimenters was they
couldn't
> get their code speed up. Which is why I always thought that the concept of
> a Tech being an experimenter type license kind of silly.
>
> Heck there is an electronics whiz named Cecil with a web site all about
neat
> antenna ideas of his. He surely fits the experimenter mold. For eons on
> these newsgroups he said he wouldn't have an Extra if they gave it to him.
> Absolutely no need said he. But when the code went away guess what. Yup
> he's an Extra. So IMO the license class has little to do with being an
> experimenter...

This whole line is silly because there are all kinds of experimenters in all license classes (and unlicensed) so how does the fact that I can experiment on any frequency make any difference.

BTW repeaters are old hat. Hams were doing remote bases and repeaters in the 50's. The biggest changes have been all the available off-the-shelf equipment since the 70's that spawned the appliance operators that need help to put up a mag mount antenna.

## 1325. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-15 23:18:21 UTC
From: JB <nospam@goofball.net>
Message-ID: <13Czk.177$Jw.106@nwrddc02.gnilink.net>
Source record: 4512

> BTW, if anyone knows, I'd appreciate knowing what the grace period after
> expiration was in 1975 (I was told by a field-office rep that my expired
> Advanced couldn't be renewed and later I was told that I was probably
> misinformed and was within a grace period, but I could never confirm that
> fact).
>
> Michael

I thought it was 2 years but it never affected me so I'm not positive. The upside is you can probably go get a new one with a weeks worth of brush-up.

## 1326. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 00:09:52 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B1AC2F4DC19E2MDWN@194.177.96.78>
Source record: 4513

Ugh! It's very similar to a power supply I worked on in the
mid-1970's for a tacan pulse power calibration system. The
scars had almost healed. There's not much advantage in it
over a vintage blood and thunder supply beyond improved
regulation. No reduction in the amount of steel or output
capacitance needed... lots of stored energy.

Though I did learn a lot about PUT's and SCR's in the process
so overall it was fun. It's also when I learned that power
supply engineers always run Towards the explosion.

steve H
> http://www.realhamradio.com/hvreg.pdf
>
> for a schematic.

# 1327. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 02:12:09 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <b4udnTBjqJJniFLVnZ2dnUVZ_j2dnZ2d@giganews.com>
Source record: 4514

msg wrote:
> AJ Lake wrote:
>
>> ken scharf wrote:
>
> <snip>
>>>As far as techs are concerned... Well I knew quite a few techs who were
>>>very much into home brew radios.
>>
>>
>> As it should be. The Tech license was supposed to be for technical use,
>> not
>> just another operators license. But of course that was a laugh. Most
>> Techs
>> bought their equipment and set up shop on the nearest local repeater...
>
> Experimenter Techs were the norm IMHO before the debacle of license
> class changes in the late '70s, and anything related to repeaters before
> then involved significant accomplishment ;) Please don't lump 'new' Techs
> with 'original' Techs.
>
> BTW, if anyone knows, I'd appreciate knowing what the grace period after
> expiration was in 1975 (I was told by a field-office rep that my expired
> Advanced couldn't be renewed and later I was told that I was probably
> misinformed and was within a grace period, but I could never confirm that
> fact).
>
> Michael

Hi Michael,

Yep -- there wasn't a lot of commercial off-the-shelf equipment available
(that didn't require any modification) until the mid-late 70s. It was
common for a VHFer to modify a Motorola/GE/etc unit to operate on the ham
bands.

IIRC, the grace period used to be 1 year but nowadays, it appears to be 2
years w/o having to retake a test:
http://wireless.fcc.gov/services/index.htm?job=cft&id=amateur&page=cft_renew_amateur

vy 73 es cul,
Bryan WA7PRC

## 1328. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 04:11:00 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <2q8uc4l0tk615nhu9q30qgrg24cgmsu5be@4ax.com>
Source record: 4515

"Bryan" <bryan.swadenerNOSPAM@comcast.net> wrote:

>there wasn't a lot of commercial off-the-shelf equipment available
>(that didn't require any modification) until the mid-late 70s. It was
>common for a VHFer to modify a Motorola/GE/etc unit to operate on the ham
>bands.

There was modification of commercial/war surplus gear done by all classes of hams, for all the ham bands, over much of ham history. The Technician (and VHFer) had no lock on modification.

But more important for this discussion, the Technician Class License was defined and supposed to be an 'experimenter' license not a 'modification' license.

And of course most Techs, however they got their gear working, (modification or appliance op), used it as a communicator anyway...

## 1329. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 04:11:01 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <dibuc4lhqoap76900p0injulgbspup0uol@4ax.com>
Source record: 4516

"JB" <nospam@goofball.net> wrote:

>there are all kinds of experimenters in all license classes

The Technician (only) was defined as an experimenters license (in the 50s).

>This whole line is silly

That's what I said. All the Techs I knew then were mostly communicators.

>BTW repeaters are old hat. Hams were doing...repeaters in the 50's.

Unattended repeaters were illegal in the 50s.

## 1330. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 04:39:01 UTC
From: JB <nospam@goofball.net>
Message-ID: <FLGzk.295$8v5.133@trnddc01>
Source record: 4517

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:dibuc4lhqoap76900p0injulgbspup0uol@4ax.com...
> "JB" <nospam@goofball.net> wrote:
>
> >there are all kinds of experimenters in all license classes
>
> The Technician (only) was defined as an experimenters license (in the
50s).
>
> >This whole line is silly
>
> That's what I said. All the Techs I knew then were mostly communicators.
>
> >BTW repeaters are old hat. Hams were doing...repeaters in the 50's.
>
> Unattended repeaters were illegal in the 50s.

A remote base is different from an unattended repeater.

## 1331. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 04:50:09 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <fkeuc4l9or52ivdhcqjljqd4nrd398vain@4ax.com>
Source record: 4518

"JB" <nospam@goofball.net> wrote:

>A remote base is different from an unattended repeater.

An unattended anything in the 50s was illegal.

# 1332. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 18:32:35 UTC
From: jimmie68@gmail.com
Message-ID: <5b80758c-9cd7-4421-8ebf-8be8e4152e2e@m44g2000hsc.googlegroups.com>
Source record: 4519

On Sep 15, 8:09 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Ugh!  It's very similar to a power supply I worked on in the
> mid-1970's for a tacan pulse power calibration system.  The
> scars had almost healed.  There's not much advantage in it
> over a vintage blood and thunder supply beyond improved
> regulation.  No reduction in the amount of steel or output
> capacitance needed... lots of stored energy.
>
> Though I did learn a lot about PUT's and SCR's in the process
> so overall it was fun. It's also when I learned that power
> supply engineers always run Towards the explosion.
>
> steve H
>
>
>
> >http://www.realhamradio.com/hvreg.pdf
>
> > for a schematic.- Hide quoted text -
>
> - Show quoted text -

I dont suppose there is an SMPS pwer supply design book for dummies
ou t there somwhere.
Seriously what would be a good book for transformer design. I
downloaded the info ferroxcube had. I was hoping they had someready
made transformers. I know they have made some for the military/gov,
but I didnt see anything off the shelf available except their cores.

Jimmie.

## 1333. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-16 18:36:13 UTC
From: JB <nospam@goofball.net>
Message-ID: <x0Tzk.272$MN3.53@nwrddc01.gnilink.net>
Source record: 4520

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:fkeuc4l9or52ivdhcqjljqd4nrd398vain@4ax.com...
> "JB" <nospam@goofball.net> wrote:
>
> >A remote base is different from an unattended repeater.
>
> An unattended anything in the 50s was illegal.
>
It isn't unattended if it has a control point.

All I know is that there was one in the late 50's. I'm not a lawyer or an
FCC spokesman but I suspect the statute of limitations is well past.

# 1334. Re: Pro-46 scanner mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 00:04:50 UTC
From: jimmie68@gmail.com
Message-ID: <04d9736e-ddf5-45ac-9781-eff2c6fa67bf@m3g2000hsc.googlegroups.com>
Source record: 4521

On Sep 14, 6:52 pm, bprid <bprid.3135...@radiobanter.com> wrote:
> I have recently bought a pro-46 scanner on ebay with the hope of doing
> some modifications to it.  One of the modifications i wanted to do was
> to restore the cellular frequency to it.  I did tons of searching and
> found a few sites that had instructions on how to do it but they were
> in text and were kind of vague.  I got as far as figuring out which
> resistors to remove but the problem is i dont know where to solder it
> back onto.  I tried a few different locations that i thought were
> correct but had no sucess. I dont want to just keep trying different
> places in fear of ruining the scanner.  If anyone has any knowledge of
> this topic and could help i would greatly appreciate it.  I can also
> provide pictures of the board showing what i have taken off and am
> hoping that maybe someone could take the picture and actually show me
> exactly where the resistor needs to go.  Any help would be appreciated.
> Thanks
>
> --
> bprid

Give me an email address that works

Jimmie

# 1335. Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 00:09:49 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <gVXzk.12264$rV4.5187@newsfe03.iad>
Source record: 4522

Still mulling over some RX design changes for a HBR receiver project that I am considering building. It is going to be an updated version of the HBR receiver projects that W6TC, Ted Crosby, penned for QST in the late 50s and early 60s.

I've decided to go with 6EH7 semi-remote pentodes for the RF and IF stages (overload resistant), meaning my filament current requirements are going out of sight.. 4.7 amps so far, so I want to cut back on the number of stages.

To cut my tube count and heater energy, I'm looking for opinions on using 6JH8s with self excited injection. The 2nd mixer requires 1515kc injection, and I'm considering using the 6JH8 as a self-excited crystal oscillator to eliminate using a separate oscillator stage. Original plan was either a 6BH6 oscillator, or 6U8 combined osc/buffer.

Second branstorm is to use a self-excited 6JH8 for the Product Detector and 85kc BFO, eliminating a separate tube and buffer stage that I had originally planned on using (another 6U8). Will osc. pulling be a problem? Any other drawbacks?

First mixer will be a 6ES8 Pullen, with a 6U8 used for the tunable LO and buffer isolation. AGC will be via a 12AU7 plate detector, 12AU7 infinite impedance AM detector, 12AX7 Q-multiplier, 12AU7 first AFA and S-meter amp, and a 6AK6 AFA. First IF is 1600kc using cascaded modified ARC-5 IF transformers. 2nd IF is 85kc, using cascaded R-23 command RX IFTs.

Pete

# 1336. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 00:15:21 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B1BC3E20812MDWN@194.177.96.78>
Source record: 4523

Howdy,

It's a tough choice, most of the books in the subject have at
least a couple of strong points or useful tricks.

If I could have only one book and it had to cover all aspects of
SMPS design I'd chose "Switching Power Supply Design" by Abraham
L. Pressman.

There are many individual books devoted to topology convolution,
wound magnetics design, control systems engineering and the care and
feeding of semiconductor switches. So no one book covers evey
aspect thoughoughly but Abe's book is pretty good.

He also wrote "Switching And Linear Power Supply Design, power
Converter Design", which was his first book. Worth having for
sometimes you might need a big linear supply.

"Switchmode Power Supply Handbook" by Keith Billings contains many
practical tips.

For magetics "Transformer And Inductor Design Handbook" by Colonel Wm.
T. McLyman is good. Another good book is Magnetics Engineering
Fundamentals and Computer Aided Design" by Fred M. Lillenstein.

"Transformers for Electronic Circuits" by Nathan Grossner is good
too, especially for heavy metal. There is a copy of it online
at some tube audio site but I can't find the link off hand.

Also check the free software and app notes at Magnetics Inc.
And at Micrometals Inc. too.

Some decent vendors of needed odds and ends are Pleo, lodestone
pacific, Robison Ind.,Dexter, MH&W. CWS Coil Winding Services
is worth checking out too.

For built transformers you'll mostly find low voltage and
telecom stuff off the shelf. Can't recall seeing any high
power (more than a couple of hundred watts) high voltage
transformers off the shelf. Even low power HV stuff is rare
unless you count the measly few hundreds of volts for EL
and neon lighting.

I really think this is a roll your own kind of affair. Furukawa
TEX-E triple insulated wire might be handy without a segmented
secondary bobbin.

I hope you find some of this useful. There are a LOT of books on
these subjects. Enough to cause my house to sag under the weight.

> I dont suppose there is an SMPS pwer supply design book for dummies
> ou t there somwhere.
> Seriously what would be a good book for transformer design. I
> downloaded the info ferroxcube had. I was hoping they had someready
> made transformers. I know they have made some for the military/gov,
> but I didnt see anything off the shelf available except their cores.
>
>
> Jimmie.
>

# 1337. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 10:34:15 UTC
From: jimmie68@gmail.com
Message-ID: <15df1803-fd58-45cc-9d37-c7fa86fdb81d@x35g2000hsb.googlegroups.com>
Source record: 4524

On Sep 16, 8:15 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> It's a tough choice, most of the books in the subject have at
> least a couple of strong points or useful tricks.
>
> If I could have only one book and it had to cover all aspects of
> SMPS design I'd chose "Switching Power Supply Design" by Abraham
> L. Pressman.
>
> There are many individual books devoted to topology convolution,
> wound magnetics design, control systems engineering and the care and
> feeding of semiconductor switches.  So no one book covers evey
> aspect thoughoughly but Abe's book is pretty good.
>
> He also wrote "Switching And Linear Power Supply Design, power
> Converter Design", which was his first book.  Worth having for
> sometimes you might need a big linear supply.
>
> "Switchmode Power Supply Handbook" by Keith Billings contains many
> practical tips.
>
> For magetics "Transformer And Inductor Design Handbook" by Colonel Wm.
> T. McLyman is good.  Another good book is Magnetics Engineering
> Fundamentals and Computer Aided Design" by Fred M. Lillenstein.
>
> "Transformers for Electronic Circuits" by Nathan Grossner is good
> too, especially for heavy metal.  There is a copy of it online
> at some tube audio site but I can't find the link off hand.
>
> Also check the free software and app notes at Magnetics Inc.
> And at Micrometals Inc. too.
>
> Some decent vendors of needed odds and ends are Pleo, lodestone
> pacific, Robison Ind.,Dexter, MH&W. CWS  Coil Winding Services
> is worth checking out too.
>
> For built transformers you'll mostly find low voltage and
> telecom stuff off the shelf.  Can't recall seeing any high
> power (more than a couple of hundred watts) high voltage
> transformers off the shelf.  Even low power HV stuff is rare
> unless you count the measly few hundreds of volts for EL
> and neon lighting.
>

> I really think this is a roll your own kind of affair. Furukawa
> TEX-E triple insulated wire might be handy without a segmented
> secondary bobbin.
>
> I hope you find some of this useful.  There are a LOT of books on
> these subjects.  Enough to cause my house to sag under the weight.
>
>
>
> > I dont suppose there is an SMPS pwer supply design book for dummies
> > ou t there somwhere.
> > Seriously what would be a good book for transformer design. I
> > downloaded the info ferroxcube had. I was hoping they had someready
> > made transformers. I know they have made some for the military/gov,
> > but I didnt see anything off the shelf available except their cores.
>
> > Jimmie.- Hide quoted text -
>
> - Show quoted text -

My big problem at the moment is designinging a transformer. after much reading in the last couple of days I am begining to think it is not the big deal I thought it was. Since I am not trying to build 50k units I dont have to use the cheapest thing I can get by with and can overdesign a bit. I can see that just a few cores may take care of all of my needs. Oh well its back to work so it will be a few days before i get to piddle with this anymore. One of my jobs this week is to go through all the old UPSs we have in the store room and find out which ones are good and chunk the rest.

Jimmie

# 1338. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 16:02:14 UTC
From: N2EY@aol.com
Message-ID: <3882e618-c6b5-447f-b609-e57040e5e8f7@t54g2000hsg.googlegroups.com>
Source record: 4525

On Sep 8, 7:51 pm, Lawrence Statton <yankeeinex...@gmail.com> wrote:
> AJ Lake <nom...@fakeaddress.com> writes:
> > > You need to understand that the FCC really doesn't want to be
> > >bothered with Ham Radio at all.
>
> > I think that the ARRL had more to do with the snafu's of that era. For
> > example incentive licensing.
>
> So, I'm a young whippersnapper (42 y/o ... got my Tech+ ticket in
> 1988):  Can someone, without adding TOO much editorial slant, explain
> what the 1970s push to incentive licensing was, and with as little
> slant as possible explain why it was a SNAFU (or as one 1x2 in the
> first club I was in said:  Ruined the service).
>
> --XE2/N1GAK

Here's a history in three parts. It was written in 1999 and so doesn't
cover the 2000 restructuring, but you'll find a lot of background in
there.

Part 1:

http://groups.google.com/group/rec.radio.amateur.policy/msg/5e237c8d619c6a90?hl=en&dmode=source

or:

http://tinyurl.com/6o8bzf

Part 2:

http://groups.google.com/group/rec.radio.amateur.policy/msg/932c3e0a55b5cfda?hl=en&dmode=source

or:

http://tinyurl.com/6lupxx

Part 3:

http://groups.google.com/group/rec.radio.amateur.policy/msg/711fd670748942ff?hl=en&dmode=source

or:

http://tinyurl.com/6dosbw

---

A couple of points:

1) "Incentive licensing" came into being in the 1960s
2) It wasn't a new thing, but rather a return to the way things used to be before 1953. Except it was a lot more complicated.
3) ARRL had a big role but wasn't the only one involved. There were at least 10 other proposals given RM numbers by FCC, over 6000 comments at a time before ECFS and the internet, and the result went into effect in 1968.
4) The Tech had a code test until 1991.
5) The ARRL did not want the VE system. FCC pushed it on us to save money.

73 de Jim, N2EY

# 1339. out-of-phase sides in a push-pull switchmode RF amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 16:11:11 UTC
From: spamhog <n1jpr@hotmail.com>
Message-ID: <722a1a37-0b4b-461a-b3fa-771fd8b741e7@c65g2000hsa.googlegroups.com>
Source record: 4526

I built a Class D push-pull CW HF TX with 74HC240s providing oscillation, buffering, an extra inverter on one side, and two stages of current amplification, eventually driving a pair of IRF530 MOSFETs..

It looks like I struck a good balance even if there was a phase offset.

This is what happened.

I turned ann inversting 8-section driver 74HC240 from a single-ended oscillator->buffer->4Xamp (N7KSB style), into this push-pull monster:

```
| -inverter-2Xamp-16Xamp-...
VXO-buffer-buffer-|
|-------------2Xamp-16Xamp-...
```

From VXO to the 2+2 sections in push-pull current amplifier, all fits into one 74HC240, fed at 5Vdc. Then, in a 8X equivalent fanout, I put 2 x 74HC240 on each side, fed at 8Vdc. 16 sections of current amplification per side provide A LOT of current, already delivered over 1W RF, and proved more than sufficient for driving a pair of IRF530's in push pull with individually trimmed positive DC bias, probably with room for further expansion.

The interesting fact is that there is one extra inverting section on one side only. On that side the signal should have been delayed by 20-30ns, the propagation time for one section. At 10MHz this should equal 70-110 degrees. In theory this should mean that both push-pull sides should spend 110 degrees in high status (MOSFETs conducting), and 110 degrees not conducting, leaving only 140 degrees for honest-to-G_d pushpullery. :-(

Woe betide such a push-pull... BUT... with my scope having one channel KO, I can't juxtapose the events - I can only combine the results in the output transformer.

The result seems like a pretty symmetric waveform, with steep voltage peaks on both sides (output balun primary still not tuned). Once filtered into a sinusoid, I see about 60W DC going in and about 45-50W RF coming out, with negligible second harmonic.

Is this normal? What did I get wrong? (I.e. got right, but just by chance). Would I be wasting my time if I sought more push-pull symmety by means of an unbal transformer? I mean somethign like this:

|-buffer-2Xamp-...
VXO-buffer-unbal
|-buffer-2Xamp-...

Any wisdom welcome!

[OK, I am going to have the scope's 2nd channel fixed anyway... :-) ]

# 1340. Re: out-of-phase sides in a push-pull switchmode RF amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 16:55:09 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <SFaAk.13293$Dj1.836@newsfe01.iad>
Source record: 4527

"spamhog" <n1jpr@hotmail.com> wrote in message
news:722a1a37-0b4b-461a-b3fa-771fd8b741e7@c65g2000hsa.googlegroups.com...
>
> I built a Class D push-pull CW HF TX with 74HC240s providing
> oscillation, buffering, an extra inverter on one side, and two stages
> of current amplification, eventually driving a pair of IRF530
> MOSFETs..
>
> It looks like I struck a good balance even if there was a phase
> offset.
>
> This is what happened.
>
> I turned ann inversting 8-section driver 74HC240 from a single-ended
> oscillator->buffer->4Xamp (N7KSB style), into this push-pull monster:
>
> | -inverter-2Xamp-16Xamp-...
> VXO-buffer-buffer-|
> |-------------2Xamp-16Xamp-...
>
> From VXO to the 2+2 sections in push-pull current amplifier, all fits
> into one 74HC240, fed at 5Vdc. Then, in a 8X equivalent fanout, I put
> 2 x 74HC240 on each side, fed at 8Vdc. 16 sections of current
> amplification per side provide A LOT of current, already delivered
> over 1W RF, and proved more than sufficient for driving a pair of
> IRF530's in push pull with individually trimmed positive DC bias,
> probably with room for further expansion.
>
> The interesting fact is that there is one extra inverting section on
> one side only. On that side the signal should have been delayed by
> 20-30ns, the propagation time for one section. At 10MHz this should
> equal 70-110 degrees. In theory this should mean that both push-pull
> sides should spend 110 degrees in high status (MOSFETs conducting),
> and 110 degrees not conducting, leaving only 140 degrees for honest-to-
> G_d pushpullery. :-(
>
> Woe betide such a push-pull... BUT... with my scope having one
> channel KO, I can't juxtapose the events - I can only combine the
> results in the output transformer.
>
> The result seems like a pretty symmetric waveform, with steep voltage
> peaks on both sides (output balun primary still not tuned). Once
> filtered into a sinusoid, I see about 60W DC going in and about 45-50W
> RF coming out, with negligible second harmonic.

>
> Is this normal? What did I get wrong? (I.e. got right, but just by
> chance). Would I be wasting my time if I sought more push-pull symmety
> by means of an unbal transformer? I mean somethign like this:
>
> |-buffer-2Xamp-...
> VXO-buffer-unbal
> |-buffer-2Xamp-...
>
> Any wisdom welcome!
>
> [OK, I am going to have the scope's 2nd channel fixed anyway... :-) ]

Well, if the second harmonic is really low then you must have a good square wave. On the output side you could determine the phase relationships by looking at the symmetry of the square wave. Adjust the phase with an rc network on the input of one of the parallel shortest delay stacks of 74hc's. I have paralled several 74xx series of chips together before and found that the propagation delays were within the spec's but varied a lot within those specs. After you tune your primary you should get a really good sine wave out of the amp. I would not go through the trouble of unbalancing the transformer as this could result in some unusual spikes on the output due to saturation of the core, or cross conduction of the Fets due to di/dvt issues. One other thing comes to mind is that with a torrid core at high current and a high frequency, then symmetry of the winding itself is critical. The spacing of the winding should fill the whole core and be spaced as uniform as you can make them. Having said that, then, match 2 IRF530's for rds on. (A few tenths of an ohm really makes a big difference when you are throwing around a bunch of amps.) This will go a long ways in preventing what looks like an unbalanced output transformer at 10 Mhz.

Sounds like your on the right track. Just a little bit of tweaking to go to get there.

Rich
In Texas

# 1341. Re: out-of-phase sides in a push-pull switchmode RF amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 21:29:05 UTC
From: spamhog <n1jpr@hotmail.com>
Message-ID: <40a6512b-bb19-46a0-a3a7-71bdedef18e0@b1g2000hsg.googlegroups.com>
Source record: 4528

Thanks Rich!

On Sep 17, 4:55 pm, "Rich Klestinez" <replytogr...@noplace.cc> wrote:
>> I would not go through the trouble of unbalancing the transformer

I didn't mean to... The idea was to generate two symmetrical and opposed signals by putting an un-bal transformer between the VXO and a first push-pull stage made with just two sections, charged with rebuilding near-square waveforms.

I matched neither driver sections nor MOSFETs,but I did hear that both can be a bit variable. Apparently the chip drivers are normally used without equalization (to the surprise of quite a few authours). As for MOSFETs, I saw several amp designs with a single separate bias trimmer, or with a single special driver chip, for several devices. I have separate trimmers, I didn't bother to check if the 1-mA voltage was the same for both - but I will. That may have helped equalize the switching point in terms of RF voltage. As for the different on-state resistance, I guess it's more critical if one has devices in parallel - in a push-pull a particuarly low resistance device won't hog the current.

>> One other thing comes to mind is that with a torrid core at high current and a high frequency, then symmetry of the winding itself is critical.

Yes, I've been extremely careful. Winding is trifilar, twisted, I took care to have symmetrical twist pitch and winding spacing.

>> torrid core

Torrid indeed. Now I have a tiny .82 core and thin wire too. At normal duty cycle all is fine, after 120s keydown one risks minor burns - but the MOSFETs barely get warm.

Coincidentally, I just got several 10s of feet of Raychem "high performance" wire after helping assemble a prototype 4-fuel car (3 liquid fuels + plugin recharger). 1.5sqmm, silver plated stranded copper alloy, thin 600V radiation-crosslinked high temperature insulator. I've been verbally told the 1/2sqmm variety can carry 30A (I asked as I worried it would not bear 3.5). I will try it on a larger core. I already recovered the ferrite of a 1-kW Hi Gain balun, but I want to see detailed wire specs first. Once stripped, this wire should do well in hi-Q coils too.

# 1342. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 21:36:16 UTC
From: JB <nospam@goofball.net>
Message-ID: <kLeAk.428$8v5.407@trnddc01>
Source record: 4529

Thanks. I thot no-code was prior to 89 but maybe not. The debate goes way
back.
<N2EY@aol.com> wrote in message
news:3882e618-c6b5-447f-b609-e57040e5e8f7@t54g2000hsg.googlegroups.com...
On Sep 8, 7:51 pm, Lawrence Statton <yankeeinex...@gmail.com> wrote:
> AJ Lake <nom...@fakeaddress.com> writes:
> > > You need to understand that the FCC really doesn't want to be
> > >bothered with Ham Radio at all.
>
> > I think that the ARRL had more to do with the snafu's of that era. For
> > example incentive licensing.
>
> So, I'm a young whippersnapper (42 y/o ... got my Tech+ ticket in
> 1988): Can someone, without adding TOO much editorial slant, explain
> what the 1970s push to incentive licensing was, and with as little
> slant as possible explain why it was a SNAFU (or as one 1x2 in the
> first club I was in said: Ruined the service).
>
> --XE2/N1GAK

Here's a history in three parts. It was written in 1999 and so doesn't
cover the 2000 restructuring, but you'll find a lot of background in
there.

Part 1:

http://groups.google.com/group/rec.radio.amateur.policy/msg/5e237c8d619c6a90?hl=en&dmode=source

or:

http://tinyurl.com/6o8bzf

Part 2:

http://groups.google.com/group/rec.radio.amateur.policy/msg/932c3e0a55b5cfda?hl=en&dmode=source

or:

http://tinyurl.com/6lupxx

Part 3:

http://groups.google.com/group/rec.radio.amateur.policy/msg/711fd670748942ff?hl=en&dmode=source

or:

http://tinyurl.com/6dosbw

---

A couple of points:

1) "Incentive licensing" came into being in the 1960s
2) It wasn't a new thing, but rather a return to the way things used to be before 1953. Except it was a lot more complicated.
3) ARRL had a big role but wasn't the only one involved. There were at least 10 other proposals given RM numbers by FCC, over 6000 comments at a time before ECFS and the internet, and the result went into effect in 1968.
4) The Tech had a code test until 1991.
5) The ARRL did not want the VE system. FCC pushed it on us to save money.

73 de Jim, N2EY

## 1343. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 22:19:50 UTC
From: N2EY@aol.com
Message-ID: <87787fac-2c5a-483d-984a-a7f7fbb04d14@t54g2000hsg.googlegroups.com>
Source record: 4530

On Sep 15, 1:34 am, msg <msg@_cybertheque.org_> wrote:

> BTW, if anyone knows, I'd appreciate knowing what the grace period after
> expiration was in 1975 (I was told by a field-office rep that my expired
> Advanced couldn't be renewed and later I was told that I was probably
> misinformed and was within a grace period, but I could never confirm that
> fact).

In 1975 the grace period was 1 year. License terms back then were 5
years.

73 de Jim, N2EY

# 1344. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 22:33:56 UTC
From: N2EY@aol.com
Message-ID: <6bc7995e-2385-450e-9492-a210ed34ac4a@p25g2000hsf.googlegroups.com>
Source record: 4531

On Sep 14, 10:45 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
> >The LACK of incentive plus the 20wpm code was the reason so few upgraded
> > > to the extra class,
>
> Correct. Before Incentive Licensing there was not much incentive to go above
> General since there were no additional privileges. Those who did upgrade to
> Extra did it for the accomplishment.

Actually, the period when Generals-and-above had all privileges was
less than 16 years (Feb 1953 to Nov 1968). Before Feb 1953, you needed
an Advanced or Extra to use 'phone on the ham bands between 2.5 and 25
MHz.

> And since it was a real (no answers supplied) exam before an official FCC
> examiner it did show accomplishment. Hams of the day often listed it on
> employment applications alongside their commercial licenses.

Also applications for college.

> >Actually the extra cw segments were the most prized,
>
> Only if you are a CW DXer. And even before the change, by gentlemans
> agreement the bottom of the CW band was left for DXers and casual CW
> operation was higher, pretty much like now.

> >so the cw requirement made sense
>
> IMO the only justification for the code test (at that time) was for possible
> emergency use. As an example a ship in distress, since many ships were still
> using CW at the time. But other than that making a ham take a special code
> test made about as much sense as making him take a special soldering test.
> That was finally recognized recently...

There were three reasons for it back then:

The first reason was the ITU treaty, which required Morse Code
testing.

The second reason was that the FCC considered Morse Code skill to be
part of what it meant to be a qualified radio amateur, particularly
one that had full HF privileges. That view has changed since the 1970s
but it was a big thing to them in those days.

The third reason was that before the 1980s amateur radio was quite
different in terms of equipment and mode/band choices. There were no
WARC bands (30, 17 and 12 meters) before 1979, and 160 was full of

LORAN and hams only had limited use of it. The only data mode was
RTTY, done with big heavy electromechanical teletype machines. SSTV
existed but required special equipment. So most hams on HF used either
Morse Code, SSB or AM. SSB and AM use a lot more spectrum than Morse
Code so the total carrying capacity of the HF ham bands would be much
less if everybody used voice.

> >As far as techs are concerned... Well I knew quite a few techs who were
> >very much into home brew radios.
>
> As it should be. The Tech license was supposed to be for technical use, not
> just another operators license. But of course that was a laugh. Most Techs
> bought their equipment and set up shop on the nearest local repeater...

That depends on what era you're talking about. The Technician was
created as part of the 1951 restructuring, and originally did not
include 6 or 2 meters. Repeaters did not become common in ham radio
until the 1970s.

73 de Jim, N2EY

# 1345. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 22:41:00 UTC
From: N2EY@aol.com
Message-ID: <f06c216b-15fc-4972-b8ee-ebac85d10c38@k13g2000hse.googlegroups.com>
Source record: 4532

On Sep 13, 7:56 pm, AJ Lake <nom...@fakeaddress.com> wrote:

> My moaning was because of the *unfairness* of the incentive licensing
> frequency changes. I passed an examination for General and I expected to be
> able to use those General frequencies. Then they took away half the General
> frequencies. Even these many years later (even after having regained those
> lost frequencies) I think it was an unfair change.

They took away half of the General *phone* frequencies on 75, 40, 20
and 15 meters. And 25 kHz of the 80, 40, 20 and 15 meter CW/data
frequencies.

I remember the moaning back then. Basically it came down to the idea
that many hams felt they'd earned the right to full privileges forever
by passing the General test, and shouldn't be required to pass any
more tests.

btw, I earned my Advanced in the summer of 1968 and had full
privileges for a few weeks until the rules changed in November 1968.

> Some may moan that the FCC now gives advanced licenses with no code test and
> modern hams don't have to work as hard for the license as hams in years
> past. Which is true. And some may moan that people can now get an advanced
> ham license by memorization without knowing the advanced electronics
> pretended in the testing. Which is true. But not me because it takes nothing
> away from privileges already earned.

The problem is that changes in the requirements change the nature of
the ARS. Not right away, but over a long time.

> I have an idea (analogy). How about we institute an Extra Plus license.
> Forget the code test because it's obsolete.

But hams still use Morse Code...

> But to make sure that the
> applicant is really qualified he must pass a *real* electronics/digital
> test, one that can't be passed by memorization. No answer sheets. At the FCC
> office like in the old days.

Won't happen because FCC won't take on that job again.

73 de Jim, N2EY

# 1346. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 22:49:46 UTC
From: N2EY@aol.com
Message-ID: <68ad1fc3-0a85-4212-a6b6-b9a3b8e2fb2c@26g2000hsk.googlegroups.com>
Source record: 4533

On Sep 9, 1:52 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> Tim Shoppa <sho...@trailing-edge.com> wrote:
> >The controversy in the 70's was the Technician license, a ticket that
> >required no code,

The Technician required 5 wpm from its creation in 1951 until 1991.
>
> Interestingly in the 50s the Technician (and Novice) was given
> by mail. And any ham friend could give you the code test.
> Anyone else could proctor your exam and certify that you
> were honest. However I'm sure it won't surprise you to learn
> that there were many Techs who never took a code
> test and had open book exams.

From 1951 until about 1953 or 54 the Novice and Tech were given at FCC offices unless you lived beyond a certain distance from an FCC exam point.

But the new licenses made so much work for FCC that they changed the rules and made both those licenses "by mail".

There was also the by-mail equivalent of the General license, called the Conditional. In the mid-1970s it was merged with the General.

I remember that when it was announced that the Conditional was being phased out, there was a false rumor that FCC would require all Conditionals to retest. You should have heard the cries of anguish! I found that puzzling because the tests weren't *that* hard. Now I have a little better understanding...

> I always wondered why if the Tech was an experimenters
> license as the FCC claimed it was, why they required a code
> test.

Because the international treaty required it. Over time that changed, but in the 1950s any license that allowed a ham to use the bands below 1 GHz required a code test.

73 de Jim, N2EY

# 1347. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 23:19:17 UTC
From: N2EY@aol.com
Message-ID: <e20ad068-842b-436f-a2b5-cbf0cb99cb42@m3g2000hsc.googlegroups.com>
Source record: 4534

On Sep 8, 10:58 pm, "JB" <nos...@goofball.net> wrote:
> "Lawrence Statton" <yankeeinex...@gmail.com> wrote in message
> news:878wu2urfu.fsf@hummer.cluon.com...
>
> > AJ Lake <nom...@fakeaddress.com> writes:
> > > > You need to understand that the FCC really doesn't want to be
> > > >bothered with Ham Radio at all.

Not any more. But in the past it was very different.

> > > I think that the ARRL had more to do with the snafu's of that era. For
> > > example incentive licensing.

Which was not really an ARRL idea - nor a new one in the 1960s.

> I am not sure what the ARRL had to do with events previous to 73 and some of
> the chronology from memory.
>
> The 11 meter ham band was taken away to make the Citizens Band in 58?  It
> didn't turn out anything like the FCC expected.

Yup. Actually FCC had created UHF cb where FRS/GMRS is now a decade
earlier, but 1950s technology was such that a good UHF radio was big,
heavy and expensive. So they reallocated 11 meters (which wasn't a ham
band by treaty) because decent sets would be a lot cheaper to make.
FCC never imagined that so many people would just ignore the rules.

> Previously there were fewer
> ham license classes and everyone was on the same page. Also privileges were
> taken away from the highest class to make a higher ones.  Ticked off a lot
> of Hams to lose.

Before 1951 there were three license classes, A, B and C. The 1951
restructuring renamed them to Advanced, General and Conditional, and
added the Novice, Technician, and Extra. That 1951 restructuring was
not an ARRL idea, btw.

> The Technician License split ham radio into two factions by offering a
> license class that had little incentive to upgrade and actually made it much
> more difficult to, by limiting the opportunities for on-the-air training.
> People who took the Novice ticket were upgraded to General in less than 2
> years or never got around to get on the air and let it lapse.

There were always lots of factions. There were the 'phone folks and
the CW bunch, the traffic handlers and the DXers, the homebrewers, kit
builders and factory-made groups, the mobileers, the VHF/UHFers, the
ragchewers, etc. Few of the divisions you see today are new.

> Hams (in my
> area anyway) were expected to build something as a right of passage.
> Building a code practice oscillator would get you a pat on the back from
> everyone and you were in with the simplest project there was.  I built that
> and the power supplies for my mil surplus rigs.  Some guys built a whole
> Novice station.

Some folks still do. Google my call, for example...

> Techs at that time were expected to retune or modify a rig
> or some project as well but would go straight to CB like intercom operations
> not conducive to learning the HF skills for upgrade.

I think the real problem was that there wasn't much casual CW
operation on VHF, and many low-cost VHF rigs wouldn't even do CW.

> In my day we were
> aware of a difference but we were all brother hams then.  I had Elmers that
> were Techs and beyond.  Most all were technically inclined enough to have
> built something.  People were generally civilized and knew that we were all
> on the same team.  If there was irritation between individuals, and there
> were oddballs, it was downplayed for the good of amateur radio, because it
> was a small world and people were listening.  And you would run into each
> other again and again, so no sense carrying a grudge.

Agreed! There were other forces at work, too. For one thing, equipment
was expensive compared to today and you needed to know something just
to tune it up and get on the air. For another, getting a license
required that you invest some time and effort into learning code and
theory.

The FCC was also a respected and almost feared entity before the cb
boom. Hams knew FCC was listening, and would find them if they
misbehaved.

> In the late 70's there was a push by ARRL to get CBers interested, and over
> the counter 2 meter radios were first becoming available.

I don't recall that at all. ARRL pushed repeaters and FM because they
were new technology, for hams anyway, and were already popular with
hams in some parts of the country.

> ARRL didn't seem to understand that CB was a different service with a
> different mindset and many were already set in their ways.   They seemed to
> be willing to get people to hang outside of RS stores and lure CBers under
> false pretenses about amateur radio in order to pump up the license roles
> and subscriptions to QST.

I don't recall that at all.

>  Wayne Green was one of the ticked off ones and
> started 73 magazine to rag about the ARRL and QST.

Wayne Green was a lifelong gadfly. He's still around, btw. Says the
Apollo moon landings were faked, among other things.

> ARRL also convinced the
> FCC (easily) to set up the volunteer examiner program.

Nope, not true. FCC did that in the early 1980s to reduce their
workload. Their funding wasn't keeping up with their costs and they
had to reduce costs somehow. ARRL had no choice.

> Novice exams were
> already given by volunteer Extras.

Actually a General or Advanced could give Novice exams.

> FCC wanted to lighten their work load
> since Ham testing and licensing was taking up most of a day at the field
> offices.

The office in Philly where I took my tests was busy three days a week
with exams.

> License renewals were then made easier and for longer.  ARRL liked it
> because the rolls didn't drop out so fast and FCC didn't have to bother as
> often.

It was FCC's idea. Less administrative work.

> The volunteer examiner program gave seminars to get people licensed but
> because of the accellerated pace,  people got licensed before they got a
> chance to learn the realities of getting on the air and keeping a station up
> and meeting the people.  Some people would find it not their cup of tea and
> leave but their license was now good for 10 years pumping up the rolls.

Yup.

> The no-code Tech license 83? further divided amateurs and even further
> sidetracked Techs from upgrading.

1991, not 1983. Don't forget code waivers, created in 1990 as a favor
of then-president Bush to ham who was also a King.

> Lead time for getting a ticket was
> shortened from the 2 to 6 months or so to learn the code to as little as 6
> weeks, then 2 weeks as the process refined.   It was notable that in the
> 80s, there were many who learned the code anyway and upgraded but the whole
> thing by and large tended to split Ham Radio into those who upgraded and
> those who couldn't very well.and were often frustrated.

There were also folks who got into ham radio back then to use it as a
personal communications
system without all the headaches of cb. Sometimes whole families got
licensed and got HTs just to keep in touch. We had a lot of them in
the 80s and 90s. Cell phones killed that.

> Many would tell
> themselves they just weren't interested and resented the others.  Way too
> sad.  I finally came to grips with the idea that they should do away with
> the Tech class license at all costs, even getting rid of code testing for

> the General to do it, just so we could mend the split.  I was stunned when
> they dropped the code requirement for Extra though.  I really haven't kept
> track of all the current structure since I got my Extra in 93.

The changes have been a little here and a little there. It was FCC,
not ARRL, who has pushed for reduced requirements since the late
1970s.

> In any case, the "incentive" licensing structure was anything but incentive.
> So much for good intentions.

Consider this, though:

In 1951 there were about 100,000 US hams.

By 1962 or so that number had grown to about 250,000.

But then the growth slowed to a trickle and by 1969 there were only a
few more than there were in 1962.

Some said the incentive licensing changes would kill off ham radio,
but instead the numbers grew all through the 1970s and 1980s and into
the 1990s. Not just Techs but Generals and above too.

btw, I got my Novice in 1967 (age 13), Advanced in 1968 (age 14) and
Extra in 1970 (age 16). I didn't think any of the tests were very
hard. Would have gotten the Extra sooner but in those days you needed
2 years experience as a General or Advanced just to try the Extra
test.

73 de Jim, N2EY

# 1348. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 23:21:37 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <pigAk.10985$PK.5749@newsfe04.iad>
Source record: 4535

FWIW, I found some good material on this subject in the
March 1960 QST, pps 33 - 38.

Another question: I've been told that the 6JH8 works best
with 0 volts on the deflector electrodes. However, it was
common practice with the 7360 to use a voltage divider
between the plate and deflector to provide negative feedback
(improved linearity) while biasing and balancing the
deflection electrodes. I'm thinking of using the same scheme
on the 6JH8, except having the low end of the voltage
dividers going to a negative bias source. That would allow
setting the electrode voltages to 0 volts, or slightly negative
or positive--whatever works best--while still keeping the
advantages of having negative feedback from the plate.
Is this worth doing?

Pete

# 1349. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-17 23:59:29 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B1CC132340012MDWN@194.177.96.78>
Source record: 4536

Howdy,

I found the URL for Grossner's book online.
http://tinyurl.com/3z7mxv

It seems to me that using the inverter oven transformer
and IGBT with a flyback controller like UC3842 might work.

Just a straight enough, hard-switched, flyback with single
ended output. You'd "only" get 1.5-2KV out less output power
maybe one half to three quarters as much... but that's not bad.

Mmm! Old UPS's have lots of good parts in them, especially
the ones with big 60Hz transformers and big heatsinks. Chuck
them into the trunk of your automobile.

> My big problem at the moment is designinging a transformer. after much
> reading in the last couple of days I am begining to think it is not
> the big deal I thought it was. Since I am not trying to build 50k
> units I dont have to use the cheapest thing I can get by with and can
> overdesign a bit. I can see that just a few cores may take care of all
> of my needs. Oh well its back to work so it will be a few days before
> i get to piddle with this anymore. One of my jobs this week is to go
> through all the old UPSs we have in the store room and find out which
> ones are good and chunk the rest.
>
> Jimmie
>

# 1350. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 00:33:39 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <8d63d4ds7fua0i8ebubv8ebckt4fu6f1mn@4ax.com>
Source record: 4537

N2EY@aol.com wrote:

> the FCC considered Morse Code skill to be
>part of what it meant to be a qualified radio amateur...

Even if there was no treaty, the ham employees in the FCC didn't want no-code. The ARRL didn't want no-code. And the average (already) code tested ham didn't want no-code. It's not surprising therefore that as a political body the FCC just agreed with it's constituents.

>I remember the moaning back then. Basically it came down to the idea
>that many hams felt they'd earned the right to full privileges forever...

I think the moaning was over the basic unfairness of *removing* privileges already earned. Over the years there has been many unpopular (to some) license changes but virtually all (maybe all?) involved giving new applicants easier privileges, not taking away already earned privileges.

>btw, I earned my Advanced in the summer of 1968 and had full
>privileges for a few weeks until the rules changed in November 1968.

And you didn't moan at all?? Give me a break...

# 1351. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 02:26:51 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <LZiAk.29033$IB6.9166@bignews8.bellsouth.net>
Source record: 4538

Tio Pedro wrote:
> Still mulling over some RX design changes for a HBR receiver project that I
> am considering building. It is going to be an updated version of the HBR
> receiver projects that W6TC, Ted Crosby, penned for QST in the late 50s and
> early 60s.
>
> I've decided to go with 6EH7 semi-remote pentodes for the RF and IF stages
> (overload resistant), meaning my filament current requirements are going out
> of sight.. 4.7 amps so far, so I want to cut back on the number of stages.
>
> To cut my tube count and heater energy, I'm looking for opinions on using
> 6JH8s with self excited injection. The 2nd mixer requires 1515kc injection,
> and I'm considering using the 6JH8 as a self-excited crystal oscillator to
> eliminate using a separate oscillator stage. Original plan was either a 6BH6
> oscillator, or 6U8 combined osc/buffer.
>
> Second branstorm is to use a self-excited 6JH8 for the Product Detector and
> 85kc BFO, eliminating a separate tube and buffer stage that I had originally
> planned on using (another 6U8). Will osc. pulling be a problem? Any other
> drawbacks?
>
> First mixer will be a 6ES8 Pullen, with a 6U8 used for the tunable LO and
> buffer isolation. AGC will be via a 12AU7 plate detector, 12AU7 infinite
> impedance AM detector, 12AX7 Q-multiplier, 12AU7 first AFA and S-meter amp,
> and a 6AK6 AFA. First IF is 1600kc using cascaded modified ARC-5 IF
> transformers. 2nd IF is 85kc, using cascaded R-23 command RX IFTs.
>
> Pete
>
>
Early SSB exciters used the 7360 tube as a mixer / vfo so I know this
type of tube will work as a self excited converter. As far as pulling
is concerned this would depend on the difference between the oscillator
and IF frequencies, or the oscillator and signal frequencies. But
pulling shouldn't be any worse than with the pentode mixers that
couplied the oscillator to the same grid as the signal input. At least
the 7360 isolates the signal and oscillator to different electrodes.
Also the signal input is balanced and shielded by the screen grid.
OTHO I don't know how good (stable) an oscillator this tube is.
Probably better as a crystal oscillator than a vfo.

# 1352. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 02:48:53 UTC
From: N2EY@aol.com
Message-ID: <7efe49af-de7a-449d-8269-2acfd4e3afd4@x41g2000hsb.googlegroups.com>
Source record: 4539

On Sep 17, 8:33 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> > the FCC considered Morse Code skill to be
> >part of what it meant to be a qualified radio amateur...
>
> Even if there was no treaty, the ham employees in the FCC didn't want
> no-code.

Nor did the non-ham employees, until the mid 1970s.

And there *was* a treaty that FCC wouldn't ignore.

> The ARRL didn't want no-code.

If you mean the membership didn't want it, you're right.
> And the average (already) code tested
> ham didn't want no-code. It's not surprising therefore that as a political
> body the FCC just agreed with it's constituents.

Because the constituents made themselves heard.

Yet as early as 1975 the FCC was trying to create a nocodetest ham
license. The opposition was clear and they backed down. FCC tried
again in 1983 and the opposition made them back down. But in 1991 FCC
did it anyway.

> >I remember the moaning back then. Basically it came down to the idea
> >that many hams felt they'd earned the right to full privileges forever...
>
> I think the moaning was over the basic unfairness of *removing* privileges
> already earned.

That's what I said - many hams felt they'd earned the privileges
*forever*, no matter how much things changed.

IMHO one of the driving forces was Sputnik and its cousins.

Up until October 1957, the USA had been confident that we were way
ahead of the Soviets in technology. We had jet planes, they were still
using props. We had transistors, computers, color TV, they were way
behind. Etc.

Then Sputnik went up, and the USSR got a first in the history books.
It was soon followed by a bunch of other firsts - first animal in
space, first pictures of the far side of the moon, first
interplanetary probe, and then the first human in space. It was a
shock that had repercussions in a lot of ways, one of which was more

emphasis on math and science in schools. Another was raising the
expectations of ham operators.

Of course it took time to change the rules.

> Over the years there has been many unpopular (to some)
> license changes but virtually all (maybe all?) involved giving new
> applicants easier privileges, not taking away already earned privileges.

Since 1969 that's been the case, because nobody wants to be blamed for
"incentive licensing version 2".

> >btw, I earned my Advanced in the summer of 1968 and had full
> >privileges for a few weeks until the rules changed in November 1968.
>
> And you didn't moan at all??

Nope. I just went and got an Extra the first time it was legal for me
to try for it. Summer 1970.

> Give me a break...

I won't lie to you and say I complained when I didn't. I was a new ham
in 1968 and I knew the rules were going to change, so I just upgraded.
It was a challenge, not something to complain about. Haven't regretted
it since.

I think what bothered a lot of hams back then was that they'd let
themselves get really rusty on both code and theory, and the thought
of having to pass more tests was really daunting. On top of that, the
Advanced and Extra tests couldn't normally be done "by mail" like the
Novice, Tech and Conditional, so they'd have to face The Man From FCC
rather than another ham for the exams.

All ancient history now. The VE system has been in place for a quarter
of a century, Generals now have at least as much 'phone space as they
had in 1968, and we're effectively down to three license classes
(almost).

73 de Jim, N2EY

# 1353. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 05:30:14 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6je7b6F2rhscU1@mid.individual.net>
Source record: 4540

ken scharf wrote:

> Early SSB exciters used the 7360 tube as a mixer / vfo so I know this
> type of tube will work as a self excited converter. As far as pulling
> is concerned this would depend on the difference between the oscillator
> and IF frequencies, or the oscillator and signal frequencies. But
> pulling shouldn't be any worse than with the pentode mixers that
> coupled the oscillator to the same grid as the signal input. At least
> the 7360 isolates the signal and oscillator to different electrodes.
> Also the signal input is balanced and shielded by the screen grid.
> OTHO I don't know how good (stable) an oscillator this tube is.
> Probably better as a crystal oscillator than a vfo.

The very /best/ mixer I ever made used the 7360.

I tried several other types of valve ("tube" - U.S.) mixer, but /nothing/ came even slightly close. The isolation of the local oscillator from the incoming signal, the conversion gain, the accuracy of balance and the bomb-proof nature of the mixer made it superior to /anything/ else I've ever tried. In my receiver, there's a font-end amplifier, using a variable-mu pentode then the 7360. It handles a bigger dynamic range than /any/ other mixer.

The VFO is a "Kallitron" type, using two FETs and a PIC-based huff-and-puff stabiliser (in 10 Hz steps) and two bipolar buffer amplifiers to drive the grids of the 7360. The PIC also drives an LCD display of frequency, and frequency stability is spectacular.

I can assure you - /there/ /is/ /no/ /substitute/ for the 7360. Simply don't consider /anything/ else. Professionally, I've worked extensively on "H-mode" switched mixers - often using very advanced components - and can tell you that the 7360 out-performs /everything/ else!

Chris

# 1354. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 05:32:51 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6je7g3F2rhscU2@mid.individual.net>
Source record: 4541

<posted & mailed>

Bob wrote:

> ken scharf wrote:
>
>> Early SSB exciters used the 7360 tube as a mixer / vfo so I know this
>> type of tube will work as a self excited converter. As far as pulling
>> is concerned this would depend on the difference between the oscillator
>> and IF frequencies, or the oscillator and signal frequencies. But
>> pulling shouldn't be any worse than with the pentode mixers that
>> coupled the oscillator to the same grid as the signal input. At least
>> the 7360 isolates the signal and oscillator to different electrodes.
>> Also the signal input is balanced and shielded by the screen grid.
>> OTHO I don't know how good (stable) an oscillator this tube is.
>> Probably better as a crystal oscillator than a vfo.
>
> The very /best/ mixer I ever made used the 7360.
>
> I tried several other types of valve ("tube" - U.S.) mixer, but /nothing/
> came even slightly close. The isolation of the local oscillator from the
> incoming signal, the conversion gain, the accuracy of balance and the
> bomb-proof nature of the mixer made it superior to /anything/ else I've
> ever tried. In my receiver, there's a front-end amplifier, using a
> variable-mu pentode then the 7360. It handles a bigger dynamic range
> than /any/ other mixer.
>
> The VFO is a "Kallitron" type, using two FETs and a PIC-based
> huff-and-puff stabiliser (in 10 Hz steps) and two bipolar buffer
> amplifiers to drive the
> grids of the 7360. The PIC also drives an LCD display of frequency, and
> frequency stability is spectacular.
>
> I can assure you - /there/ /is/ /no/ /substitute/ for the 7360. Simply
> don't consider /anything/ else. Professionally, I've worked extensively
> on "H-mode" switched mixers - often using very advanced components - and
> can tell you that the 7360 out-performs /everything/ else!

One other thing - self-excited mixers /never/ perform well. You should
re-think your approach.

Chris

# 1355. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 06:21:24 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <3qq3d4dfvig673vi45sjcpuqtdgnbeesun@4ax.com>
Source record: 4542

N2EY@aol.com wrote:

>But in 1991 FCC did it [a no-code license] anyway.

I always thought it was silly having a code test for an 'experimenter' license anyway. I never used CW as a Tech. Heck I was too busy working 6M DX (on AM) during that best of all cycles during the late 50s. But I suppose could have told the FCC I was experimenting with the ionosphere...

>Then Sputnik went up, and the USSR got a first in the history books.

Yes, remember it well. I listened to Sputnik on my S40.

>It [Russian technology] was a shock that had repercussions in a lot of ways,

Yup. Got me many years of employment (government contracts).

>nobody wants to be blamed for "incentive licensing version 2"

Can't blame em. One screw up was enough.

>Generals now have at least as much 'phone space as they
>had in 1968,

I could have just kept my old General (or even Tech) license. That's all I really need these days for CW ragchewing.

>and we're effectively down to three license classes (almost).

I predict it will be only one license eventually.

# 1356. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 06:49:28 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jebvoF2ti75U1@mid.individual.net>
Source record: 4543

AJ Lake wrote:

> I predict it will be only one license eventually.

It (effectively) is over here in the UK. We do have a limited "novice" licence, but there's little point in going for that. Most people just go for the full licence.

We used to have "A" and "B" licences - the "A" was all bands, all modes, and the "B" was limited to above 50 MHz and didn't require the Morse Test. The requirement for the Morse was removed, so now it's all amalgamated into one licence.

C.

# 1357. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 07:02:22 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <svu3d495tkim5jqai6f5cipu3dagubt4h1@4ax.com>
Source record: 4544

Bob <biascomms@invalid.inv> wrote:

>We used to have "A" and "B" licences - the "A" was all bands, all modes, and
>the "B" was limited to above 50 MHz and didn't require the Morse Test. The
>requirement for the Morse was removed, so now it's all amalgamated into one
>licence.

Was there much moaning over there over the loss of the code test?

In any of your license changes have practicing hams ever lost frequency
privileges they had previously earned?

# 1358. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 10:41:44 UTC
From: N2EY@aol.com
Message-ID: <7487f40b-8dc0-4eb4-afbf-b3d0874d01d7@79g2000hsk.googlegroups.com>
Source record: 4545

On Sep 18, 2:21 am, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >But in 1991 FCC did it [a no-code license] anyway.
>
> I always thought it was silly having a code test for an 'experimenter'
> license anyway.

Had there not been a treaty requirement, FCC might have not had a
Morse test for Tech from the beginning. We'll never know.

>I never used CW as a Tech. Heck I was too busy working 6M DX
> (on AM) during that best of all cycles during the late 50s. But I suppose
> could have told the FCC I was experimenting with the ionosphere...

A lot of VHF/UHF experimenting in those days did use Morse Code and
still does today. EME (moonbounce), meteor scatter, aurora,
troposcatter and other "weak signal" work was almost all CW. Most of
it still is. Of course those were specialized things back then.

> >Then Sputnik went up, and the USSR got a first in the history books.
>
> Yes, remember it well. I listened to Sputnik on my S40.

Then you may remember the reactions. All of a sudden we were #2 and
that wasn't good enough.

> >It [Russian technology] was a shock that had repercussions in a lot of ways,
>
> Yup. Got me many years of employment (government contracts).

And convinced FCC to be dissatisfied.

> >nobody wants to be blamed for "incentive licensing version 2"
>
> Can't blame em. One screw up was enough.

Was it really a screw up? I think the real mistake was back in 1952.

What happened was that in 1951 the FCC restructured the ham radio
license classes and added a whole bunch of new license classes. That
restructuring was in part due to proposals from two small groups
(membership a couple of thousand each) who argued that the then-
current US amateur license requirements, even for Class A, were too
easy.

In those days it took an Advanced (old Class A) for full privileges.
Which meant taking another 50 question written test for hams with

Generals. The new Extra also had full privileges but had more requirements like 20 wpm code, a 100 question written, and 2 years experience.

But as part of the 1951 restructuring, FCC announced that at the end of 1952 they'd stop issuing new Advanceds. So if a ham didn't have an Advanced by the end of 1952, s/he'd have to go for the much more involved Extra.

A considerable number of hams rushed to get the Advanced before the door closed at the end of 1952. But then, in a surprising about-face, in mid-December the FCC announced that as of Feb 1953 all Generals, Conditionals, Advanceds and Extras would have full operating privileges.

You can just imagine the reaction from hams who'd worked hard to get their Advanceds or Extras, then suddenly found the HF 'phone bands flooded with Generals and Conditionals who had the same privileges.

I don't know why the FCC suddenly reversed their plan, which they'd taken several years to develop. Or why they didn't just leave things the way they were in 1952, and left the Advanced open to new issues.

Nobody I have talked to, nor any reference I have read, gives any reason for that Great Giveaway. And most of the hams licensed after 1952 that I have encountered have no idea of that piece of history.

When I first got interested in getting a ham license I bought the ARRL License Manual for fifty cents. I clearly remember opening it up and seeing the chart of license classes and privileges. I thought that it was incredibly odd that there were six license classes, but four of them (General, Conditional, Advanced and Extra) all carried exactly the same operating privileges. What was up with that? I thought then (and still do) that it made no sense at all.

> >Generals now have at least as much 'phone space as they
> >had in 1968,

> I could have just kept my old General (or even Tech) license. That's all I
> really need these days for CW ragchewing.

The circle is complete.

I remember in the 1960s thinking that the incentive license idea was good but the application was bad. I thought what should have been done was to increase the privileges of Advanceds and Extras rather than taking anything away.

For example, in those days on 80/75 the Novice subband was 3700 to 3750 and the 'phone subband was 3800 to 4000. 3750 to 3800 was where the foreign 'phone stations hung out to get away from US QRM. Why not make 3750 to 3800 a phone band for Extras only? And make 3775 to 3800 a phone band for Extras and Advanceds? Similar things could be done to other bands.

Another incentive would be increased power. The old rule was 1000 watts input; I thought a lot of hams would have upgraded if Extras were allowed, say, 2500 watts input. Sure it's only a couple of dB but that never stopped anybody.

I also thought that optional distinctive callsigns for various license classes would be a good incentive too. (That one actually happened, but it was many years later).

> >and we're effectively down to three license classes (almost).
>
> I predict it will be only one license eventually.

Maybe, but it will take a very long time. In seven years we've lost only about 1/3 of the Advanceds. And the FCC doesn't seem inclined to give automatic upgrades nor to merge license classes except by renewal.

I've come across Advanceds who say they like their license because it supposedly proves they passed 13 wpm code. But in fact it doesn't, because from 1990 to 2000 one could get any class of license with 5 wpm and a medical waiver.

The first license class to disappear completely will be the Tech Plus, because FCC has been renewing them as Technician since April 2000. In another 19 months the last Tech Plus should disappear.

The Novice license totals are now well under 20,000 (from 50,000 in 2000) and is also dwindling.

Who will be the very last Novice? The very last Advanced? How long will it take for those license classes to disappear?

73 de Jim, N2EY

# 1359. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 11:41:43 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jet3nF2vm85U1@mid.individual.net>
Source record: 4546

AJ Lake wrote:

> Was there much moaning over there over the loss of the code test?

Some of the "old timers" complained, but most accepted it.

> In any of your license changes have practicing hams ever lost frequency
> privileges they had previously earned?

There are occasional changes, but they are mostly in our favour (like when we got 50 and 70 MHz bands, previously used for VHF TV).

Bob

# 1360. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 13:11:26 UTC
From: jimmie68@gmail.com
Message-ID: <12ccce41-e9ea-4526-b293-49d9beb9349f@z66g2000hsc.googlegroups.com>
Source record: 4547

On Sep 17, 7:59 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> I found the URL for Grossner's book online.http://tinyurl.com/3z7mxv
>
> It seems to me that using the inverter oven transformer
> and IGBT with a flyback controller like UC3842 might work.
>
> Just a straight enough, hard-switched, flyback with single
> ended output.  You'd "only" get 1.5-2KV out less output power
> maybe one half to three quarters as much... but that's not bad.
>
> Mmm!  Old UPS's have lots of good parts in them, especially
> the ones with big 60Hz transformers and big heatsinks.  Chuck
> them into the trunk of your automobile.
>
>
>
> > My big problem at the moment is designinging a transformer. after much
> > reading in the last couple of days I am begining to think it is not
> > the big deal I thought it was. Since I am not trying to build 50k
> > units I dont have to use the cheapest thing I can get by with and can
> > overdesign a bit. I can see that just a few cores may take care of all
> > of my needs. Oh well its back to work so it will be a few days before
> > i get to piddle with this anymore. One of my jobs this week is to go
> > through all the old UPSs we have in the store room and find out which
> > ones are good and chunk the rest.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

I was reading up on push-pull topology of switching power supplies
and see that they have problems with flux imbalance. I used to work on
some power supplies that were push pull when I was in the USAF and the
driver transistors were always failing, now I know why. I see that
this isnt as much of a problem for FETs, How about IGBTs.

Jimmie

# 1361. Re: out-of-phase sides in a push-pull switchmode RF amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 15:08:05 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <phLAk.13411$wr1.1483@newsfe02.iad>
Source record: 4407

"spamhog" <n1jpr@hotmail.com> wrote in message
news:40a6512b-bb19-46a0-a3a7-71bdedef18e0@b1g2000hsg.googlegroups.com...
Thanks Rich!

On Sep 17, 4:55 pm, "Rich Klestinez" <replytogr...@noplace.cc> wrote:
>> I would not go through the trouble of unbalancing the transformer

I didn't mean to... The idea was to generate two symmetrical and
opposed signals by putting an un-bal transformer between the VXO and a
first push-pull stage made with just two sections, charged with
rebuilding near-square waveforms.

I matched neither driver sections nor MOSFETs,but I did hear that both
can be a bit variable. Apparently the chip drivers are normally used
without equalization (to the surprise of quite a few authours). As for
MOSFETs, I saw several amp designs with a single separate bias
trimmer, or with a single special driver chip, for several devices. I
have separate trimmers, I didn't bother to check if the 1-mA voltage
was the same for both - but I will. That may have helped equalize the
switching point in terms of RF voltage. As for the different on-state
resistance, I guess it's more critical if one has devices in parallel
- in a push-pull a particuarly low resistance device won't hog the
current.

>> One other thing comes to mind is that with a torrid core at high current
>> and a high frequency, then symmetry of the winding itself is critical.

Yes, I've been extremely careful. Winding is trifilar, twisted, I
took care to have symmetrical twist pitch and winding spacing.

>> torrid core

Torrid indeed. Now I have a tiny .82 core and thin wire too. At
normal duty cycle all is fine, after 120s keydown one risks minor
burns - but the MOSFETs barely get warm.

Coincidentally, I just got several 10s of feet of Raychem "high
performance" wire after helping assemble a prototype 4-fuel car (3
liquid fuels + plugin recharger). 1.5sqmm, silver plated stranded
copper alloy, thin 600V radiation-crosslinked high temperature
insulator. I've been verbally told the 1/2sqmm variety can carry 30A
(I asked as I worried it would not bear 3.5). I will try it on a
larger core. I already recovered the ferrite of a 1-kW Hi Gain balun,
but I want to see detailed wire specs first. Once stripped, this wire
should do well in hi-Q coils too.

Awsome but really good wire!

If the Fet's are just barely warm it is my guess that you are driving them well into saturation and that good. As far as the core getting that hot, well that's not so good.
I digress. Some years back (70's) I tried to model the BH vs temperature of some high power cores that I was using at 452 Khz. They were getting very hot and we couldent figgure out why. Upon observing the BH curve at 452 Khz at 101% saturation there were bumps and little knots on the curve, they were really temperature dependant as well. Turned out (remember this was in the 1970's) this was a combination of grain size and a purely mechanical effect (pizoelectric). We switched to a different material with a very fine grain domains and the cores ran cool. I nearly wore out my Hemi 256 slide rule on that one. Still have the darn thing. Nowdays core selection is much easier for high current high frequency uses. Pick a core empirically do your design and take advice from the wisdom of the below.

FYI. Adams magnetic products, Tom Corrigan Applications Engineer, 1-800-747-7543 or his direct line 630-359-9445. A really good guy and reps several lines of cores. Of course there is always the Ferroxcube area application engineers that are some of the best in the world that I have worked with in the past year. They will take the time to help you, however, you should be conversant in the terms of the language of magnetics or you wont understand what they mean.

Its a challange, but the rewards are great. You will have a transmitter that will be reliable and reproducible.

rich
in Texas

PS I have retired now (66 Yrs old). Not a ham yet. As soon as I get most of my honey-doos done I am considering trying for a licence.

# 1362. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 16:05:15 UTC
From: N2EY@aol.com
Message-ID: <cff8aca2-e79e-4595-bbd8-2af0b82f5905@j22g2000hsf.googlegroups.com>
Source record: 4548

I'll reply to two posts at once!

Tio Pedro wrote:

>Still mulling over some RX design changes for a HBR receiver project that I
>am considering building. It is going to be an updated version of the HBR
>receiver projects that W6TC, Ted Crosby, penned for QST in the late 50s and
>early 60s.

Interesting! But be aware that the W6TC design has its flaws.

The first is that there are a lot of stages before you get to the selectivity, which limits the dynamic range. The second is that the tunable LO operates at a high frequency on the upper bands and uses plug-in coils, which limits the thermal and mechanical stability as well as having different calibration on each band.

>I've decided to go with 6EH7 semi-remote pentodes for the RF and IF stages
>(overload resistant), meaning my filament current requirements are going out
>of sight.

6EH7 is a good tube. The receiver part of my rig (google my call) uses one in the RF stage and one in the first IF, with a 7360 mixer.

Some must-read QST articles are:

W1DX's article about "what's wrong with our present receivers", January, 1957

The Squires-Sanders article about using the 7360 as a receiver front-end mixer, September 1963

The "Miser's Dream" rx with 7360 mixer and other neat ideas, by W1DX, May 1965

W1KLK's "Experimental Receiver for 75 meter DX", February 1972

An article about the 7360 product detector for the HBR, December 1960

A 6 meter SSB transmitter using the 6JH8 as a high-level balanced modulator, October 1963

The RSGB Handbooks of the 1960s are the best for receiver ideas using the 7360, IMHO.

I know of one design using the 6JH8 or its cousins the 6ME8 and 6HW8. (The 6AR8 is an early tube that is reportedly microphonic).:

http://g4oep.atspace.com/retro/retro.htm

Worth a look!

> 4.7 amps so far, so I want to cut back on the number of stages.

One word: Don't. Use a bigger power transformer, or an auxiliary heater transformer instead. The rx you describe is a big project, why compromise it? With a separate heater transformer having its own power switch, you could put the critical oscillator heaters on it and let them run semi-continuously.

>To cut my tube count and heater energy, I'm looking for opinions on using
>6JH8s with self excited injection. The 2nd mixer requires 1515kc injection,
>and I'm considering using the 6JH8 as a self-excited crystal oscillator to
>eliminate using a separate oscillator stage. Original plan was either a 6BH6
>oscillator, or 6U8 combined osc/buffer.

The 6BH6 draws only 0.15 A of heater current. IMHO that small saving is not worth the compromise.

Self-exciting the 6JH8 means the signal will go into the deflectors rather than the grid. That's the opposite of usual receiver-mixer practice, where the oscillator feeds the deflectors. I don't know what the noise figure will be, but I do know that all the beam-deflection receiver mixers I've seen put the signal into the grid for high gain and low noise.

The only places I've seen the signal on the deflectors and the oscillator on the grid is in high-signal-level applications like transmitting balanced modulators and mixers, and receiving product detectors, where noise figure isn't really an issue and low gain is OK.

>Second branstorm is to use a self-excited 6JH8 for the Product Detector and
>85kc BFO, eliminating a separate tube and buffer stage that I had originally
>planned on using (another 6U8). Will osc. pulling be a problem? Any other
>drawbacks?

I don't know if you really need a buffer stage on the BFO. A 6BH6 will do the job. See above about where the signal goes.

>First mixer will be a 6ES8 Pullen, with a 6U8 used for the tunable LO and
>buffer isolation.

How stable an oscillator is acceptable?

> AGC will be via a 12AU7 plate detector, 12AU7 infinite
>impedance AM detector, 12AX7 Q-multiplier, 12AU7 first AFA and S-meter amp,
>and a 6AK6 AFA. First IF is 1600kc using cascaded modified ARC-5 IF
>transformers. 2nd IF is 85kc, using cascaded R-23 command RX IFTs.
>FWIW, I found some good material on this subject in the
>March 1960 QST, pps 33 - 38.

Straight out of the RCA Transmitting Tube manual. (RCA considered the 7360 to be a transmitting tube!)

>Another question: I've been told that the 6JH8 works best
>with 0 volts on the deflector electrodes. However, it was
>common practice with the 7360 to use a voltage divider
>between the plate and deflector to provide negative feedback
>(improved linearity) while biasing and balancing the
>deflection electrodes.

I'm not sure about the negative-feedback part but I do know the idea
was balance. And the 7360 deflectors were supposed to be biased a
couple dozen volts positive.

>I'm thinking of using the same scheme
>on the 6JH8, except having the low end of the voltage
>dividers going to a negative bias source. That would allow
>setting the electrode voltages to 0 volts, or slightly negative
>or positive--whatever works best--while still keeping the
>advantages of having negative feedback from the plate.
>Is this worth doing?

Only way to know for sure is to try. See the G4OEP rx page.

73 es GL de Jim, N2EY

# 1363. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 20:57:44 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <ehzAk.10609$Il.2548@newsfe09.iad>
Source record: 4549

<N2EY@aol.com> wrote in message
news:cff8aca2-e79e-4595-bbd8-2af0b82f5905@j22g2000hsf.googlegroups.com...
>
> Tio Pedro wrote:
> > Interesting! But be aware that the W6TC design has its flaws.
>
> The first is that there are a lot of stages before you get to the
> selectivity, which limits the dynamic range.

I was seriously considering adding a half-lattice crystal filter at the
first IF; the IF filter in the Heath HR-10 would be do the job. Now,
to find a junker! I'll probably end up cascading
IF transformers at 1600kc to improve the shape factor and hopefully
improve the dynamic range numbers for signals further out on the
filter slopes. I have the transformers, so I might as well use them
in this lifetime.

The second is that the
> tunable LO operates at a high frequency on the upper bands and uses
> plug-in coils, which limits the thermal and mechanical stability as
> well as having different calibration on each band.

But each LO coil is hand calibrated for thermal drift :) I'd think the
Q would be much better using full-sized plug-in coils vs. phenolic
bandswitches and a compromised inductors. Ted's design ran the
LO on low side injection and used second harmonic injection for
the first mixer on the upper bands. That really sucks and kills the
idea of balanced beam tube in the first mixer. I agree, the design
is dated, and the advent of cheap IF filters killed the design. The
harmonic mixing scheme really bothers me.

> 6EH7 is a good tube. The receiver part of my rig (google my call) uses
> one in the RF stage and one in the first IF, with a 7360 mixer.
>
Been, there, done that :) Getting to see a lot of nice RXs searching
the web!

> One word: Don't. Use a bigger power transformer, or an auxiliary
> heater transformer instead. The rx you describe is a big project, why
> compromise it? With a separate heater transformer having its own power
> switch, you could put the critical oscillator heaters on it and let
> them run semi-continuously.
>

As you noted, the design is inherently limited..

> Self-exciting the 6JH8 means the signal will go into the deflectors
> rather than the grid. That's the opposite of usual receiver-mixer
> practice, where the oscillator feeds the deflectors. I don't know what
> the noise figure will be, but I do know that all the beam-deflection
> receiver mixers I've seen put the signal into the grid for high gain
> and low noise.

Check SSB Exciter Circuits Using a New Beam Deflection Tube,
by K2FF in the March 1960 QST. It is one of the better presentations
that appeared in QST. He also shows a self-excited product detector
circuit as one example. I'd think the advantage in the PD with
G1 injection might be improved BFO blowby rejection,
which could otherwise affect the AGC system?
>
>
> I don't know if you really need a buffer stage on the BFO. A 6BH6 will
> do the job. See above about where the signal goes.

The buffer could be used for a CF or phase inverter, if I wanted to
use BFO injection on both deflectors. I know only one needs to be
driven in practice.
>
>>First mixer will be a 6ES8 Pullen, with a 6U8 used for the tunable LO and
>>buffer isolation.
>
> How stable an oscillator is acceptable?

Buffer stage is recommended practice with the Pullen Mixer. It's easier
to use the pentode/triode, and ending not needing to use the stage, than
to add it later..
>
> I'm not sure about the negative-feedback part but I do know the idea
> was balance. And the 7360 deflectors were supposed to be biased a
> couple dozen volts positive.

The negative feedback is mentioned in the QST article; it applies to
the product detector circuit where the deflector bias is taken directly from
the plates of the tube.
>
> 73 es GL de Jim, N2EY

Thanks for the comments..

Pete

# 1364. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-18 23:30:10 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <f6k5d4dvd5g8dqtt0ret8t16lmumdpcp7c@4ax.com>
Source record: 4550

N2EY@aol.com wrote:

>Had there not been a treaty requirement, FCC might have not had a
>Morse test for Tech from the beginning.

The treaty applied to 30MHz and below. Techs couldn't go there.
The treaty wouldn't apply to them.

>A lot of VHF/UHF experimenting in those days did use Morse Code

Techs only had 220 and up. Why require a 5 WPM test for moon bounce??

>and still does today. EME (moonbounce), meteor scatter, aurora,
>troposcatter and other "weak signal" work was almost all CW.

If Techs do all that CW work today *without* a code test, what justification
is there for requiring the code test back then?

>Was it [incentive licensing] really a screw up?
>I think the real mistake was back in 1952.

My old boss used to moan bitterly about the 52 license change when I worked
for him in the 50s. He had been a Class A. But the difference is that in
that change he *didn't lose* any privileges. He did lose privileges with the
later Incentive Licensing change though. Which change do you think he felt
worse about?

>You can just imagine the reaction from hams who'd worked hard to get
>their Advanceds or Extras, then suddenly found the HF 'phone bands
>flooded with Generals and Conditionals who had the same privileges.

Probably like having the HF frequencies flooded by no-coders... 8-O

>Another incentive would be increased power.

If I were made boss, the maximum power allowed for any class would be 100W.
And if used as an incentive, start at say 25 W for the entry license. Just
think of the reduction in neighbor complaints. Just think of the increase in
operator skill...

>Who will be the very last Novice? The very last Advanced? How long
>will it take for those license classes to disappear?

They will likely disappear when they change to one license...
(Like the Class A disappeared.)

# 1365. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 00:56:59 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B1DCAF1753AB2MDWN@194.177.96.78>
Source record: 4401

Short answer, IGBTs are much better but not as good as MOSFETs.
In many cases they're good enough that the turn-off tail can be
ignored with very minor accommodation if any. In some cases an
IGBT may be superior than a MOSFET because you don't have to worry
about the switches RDSon drifting apart with temperature.

Though now days you can buy a 75V 120A 0.0004 Ohm MOSFET in a
T0-220 package... I guess RDSon isn't much of an issue.

The main problem with both IGBT and regular old bipolar transistors
in a push-pull circuit is the turn-off tail. The MOSFET does not
have a turn-off tail. There are two classes of IGBT, punch-though
and non-punch through. The punch-trough devices have better turn-off
times but are more fragile. Lately I've been using Trench Field Stop
IGBT's and they're very good.

There are several means of preventing imbalance of the transformer
in driven (not self oscillating) converters. The PWM will adjust
the on-time to compensate for the tail as it regulates the output
voltage. You can sense the differences with a circuit that converts
time to voltage (a capacitor and a current source) then make the
correction.

There are clever flux balancing windings that can be added. One
Unitrode app note describes how this can be done in the course of
presenting a half-bridge power converter. I can't recall the
document number.

In the half bridge and full bridge sometimes a capacitor in series
with the primary wdinding prevents saturation. I think you could
build a two capacitor divider across the input voltage and at the
center connect your transformer centertap lead. Then as the
imbalance increases the voltage at the center tap with shift
to compensate for it. I've seen half bridges built this way...
might work for a push pull... just guessing as I've never tried it.

A very small gap (0.001-0.003") will prevent saturation if the
imbalance is minor and not decrease the magnetizing inductance
too much. Sometimes any decrease is unwelcome though.
A distributed gap material like powdered-iron, koolmu, MPP
or sendust, might be useful if you expect to have flux imbalance
problems.

Pulse by pulse current limiting will mask the problem, so the
transformer is in saturation but not far into it and the current
limit keeps it from destroying the switches. Kinda risky to rely

on this alone but it's helpful combined with other measures.

In a current fed converter the transformer may saturate and then
switches are effectively connected directly to the current source.
No harm done! A current fed push-pull is a rugged topology. The
VAX8800 computer uses one for its control and start-up power supply.

> I was reading up on push-pull topology of switching power supplies
> and see that they have problems with flux imbalance. I used to work on
> some power supplies that were push pull when I was in the USAF and the
> driver transistors were always failing, now I know why. I see that
> this isnt as much of a problem for FETs, How about IGBTs.
>
>
> Jimmie
>

# 1366. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 02:13:34 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <RTDAk.37908$vX2.17185@bignews6.bellsouth.net>
Source record: 4402

Bob wrote:
> ken scharf wrote:
>
>> Early SSB exciters used the 7360 tube as a mixer / vfo so I know this
>> type of tube will work as a self excited converter. As far as pulling
>> is concerned this would depend on the difference between the oscillator
>> and IF frequencies, or the oscillator and signal frequencies. But
>> pulling shouldn't be any worse than with the pentode mixers that
>> coupled the oscillator to the same grid as the signal input. At least
>> the 7360 isolates the signal and oscillator to different electrodes.
>> Also the signal input is balanced and shielded by the screen grid.
>> OTHO I don't know how good (stable) an oscillator this tube is.
>> Probably better as a crystal oscillator than a vfo.
>
> The very /best/ mixer I ever made used the 7360.
>
> I tried several other types of valve ("tube" - U.S.) mixer, but /nothing/
> came even slightly close. The isolation of the local oscillator from the
> incoming signal, the conversion gain, the accuracy of balance and the
> bomb-proof nature of the mixer made it superior to /anything/ else I've
> ever tried. In my receiver, there's a font-end amplifier, using a
> variable-mu pentode then the 7360. It handles a bigger dynamic range
> than /any/ other mixer.
>
> The VFO is a "Kallitron" type, using two FETs and a PIC-based huff-and-puff
> stabiliser (in 10 Hz steps) and two bipolar buffer amplifiers to drive the
> grids of the 7360. The PIC also drives an LCD display of frequency, and
> frequency stability is spectacular.
>
> I can assure you - /there/ /is/ /no/ /substitute/ for the 7360. Simply
> don't consider /anything/ else. Professionally, I've worked extensively
> on "H-mode" switched mixers - often using very advanced components - and
> can tell you that the 7360 out-performs /everything/ else!
>
> Chris
>
Sounds like you're building a receiver with only one tube in it (a 7360)
and everything else solid state. Then again the 7360 probably makes a
very good product detector too.

# 1367. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 02:20:59 UTC
From: N2EY@aol.com
Message-ID: <25935aba-66a1-42fe-bb11-cd29672917cd@x35g2000hsb.googlegroups.com>
Source record: 4403

On Sep 18, 7:30 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >Had there not been a treaty requirement, FCC might have not had a
> >Morse test for Tech from the beginning.
>
> The treaty applied to 30MHz and below.

No, it applied to 1000 MHz and below, back when the Technician was
created.

Originally the treaty required Morse Code testing for all amateurs.
Then in the late 1940s (1947 Atlantic City conference, IIRC),
additional wording was added that removed the requirement for licenses
that only allowed operation above 1000 MHz.

Over time that 1000 MHz limit was lowered, until it finally reached 30
MHz. And then in 2003 the whole code test thing was made optional.

> Techs couldn't go there.
> The treaty wouldn't apply to them.

The treaty in effect in 1951 applied to them.

> >A lot of VHF/UHF experimenting in those days did use
> > Morse Code
>
> Techs only had 220 and up. Why require a 5 WPM test for moon > bounce??

What mode would a 1950s or 1960s ham use for moonbounce? Aurora?
Meteor or tropo scatter? Satellite comms?
>
> >and still does today. EME (moonbounce), meteor scatter, aurora,
> >troposcatter and other "weak signal" work was almost all CW.
>
> If Techs do all that CW work today *without* a code test, what
> justification
> is there for requiring the code test back then?

1) The treaty
2) Those modes were new back then.

The big question is, how many Techs actually did that stuff?

> >Was it [incentive licensing] really a screw up?
> >I think the real mistake was back in 1952.
>
> My old boss used to moan bitterly about the 52 license change

> when I worked
> for him in the 50s. He had been a Class A.

And he still was, only they called it Advanced and it made no
difference in privileges.

> But the difference is that in
> that change he *didn't lose* any privileges.

Instead, a lot of hams got them for free.

> He did lose privileges with the
> later Incentive Licensing change though. Which change do
> you think he felt
> worse about?

Sounds like a sense of entitlement to me.
>
> >You can just imagine the reaction from hams who'd worked hard > > to get
> >their Advanceds or Extras, then suddenly found the HF 'phone
> >bands
> >flooded with Generals and Conditionals who had the same privileges.
>
> Probably like having the HF frequencies flooded by no-coders... 8-O

No, much worse.

The FCC has been reducing license requirements for almost 30 years, so
the final dropping of the code test should have been no surprise for
anyone. In fact I am still amazed that it took FCC 3-1/2 years to do
it after the treaty changed. I figured six months, tops.

But in the late 1940s the FCC went through a long process of
developing a new license structure that was a lot more complex than
the old ABC system. And when they rolled it out, one of the big
features was that the all-privileges license would be harder to get.

Then at the last minute they tossed away most of the idea and went in
a completely different direction.

> >Another incentive would be increased power.
>
> If I were made boss, the maximum power allowed for any class
> would be 100W.
> And if used as an incentive, start at say 25 W for the entry
> license.

How's anybody gonna work EME with that?

> Just
> think of the reduction in neighbor complaints. Just think of the
> increase in operator skill...

But to do it you'd have to take privileges away from almost every ham.
Worse, they could not get those privileges back.

You'd also make a lot of expensive gear practically worthless.

> >Who will be the very last Novice? The very last Advanced? How long
> >will it take for those license classes to disappear?
>
> They will likely disappear when they change to one license...
> (Like the Class A disappeared.)

But the Class A didn't disappear.

In the 1951 restructuring, it was renamed "Advanced", and survives to
this day. When it was first closed to new issues at the end of 1952,
FCC still kept it on the books. That made a big difference in 1968 and
1969 when the IL changes happened, because Advanceds had a lot more
'phone space than Generals after those changes.

73 de Jim, N2EY

# 1368. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 02:22:51 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <z0EAk.37913$vX2.11498@bignews6.bellsouth.net>
Source record: 4404

Bob wrote:
> ken scharf wrote:
>
>> Early SSB exciters used the 7360 tube as a mixer / vfo so I know this
>> type of tube will work as a self excited converter. As far as pulling
>> is concerned this would depend on the difference between the oscillator
>> and IF frequencies, or the oscillator and signal frequencies. But
>> pulling shouldn't be any worse than with the pentode mixers that
>> coupled the oscillator to the same grid as the signal input. At least
>> the 7360 isolates the signal and oscillator to different electrodes.
>> Also the signal input is balanced and shielded by the screen grid.
>> OTHO I don't know how good (stable) an oscillator this tube is.
>> Probably better as a crystal oscillator than a vfo.
>
> The very /best/ mixer I ever made used the 7360.
>
> I tried several other types of valve ("tube" - U.S.) mixer, but /nothing/
> came even slightly close. The isolation of the local oscillator from the
> incoming signal, the conversion gain, the accuracy of balance and the
> bomb-proof nature of the mixer made it superior to /anything/ else I've
> ever tried. In my receiver, there's a font-end amplifier, using a
> variable-mu pentode then the 7360. It handles a bigger dynamic range
> than /any/ other mixer.
>
> The VFO is a "Kallitron" type, using two FETs and a PIC-based huff-and-puff
> stabiliser (in 10 Hz steps) and two bipolar buffer amplifiers to drive the
> grids of the 7360. The PIC also drives an LCD display of frequency, and
> frequency stability is spectacular.
>
> I can assure you - /there/ /is/ /no/ /substitute/ for the 7360. Simply
> don't consider /anything/ else. Professionally, I've worked extensively
> on "H-mode" switched mixers - often using very advanced components - and
> can tell you that the 7360 out-performs /everything/ else!
>
> Chris
>
The very first ARRL HB I ever owned (1967) used the 7360 in the mixer
stage of a classic receiver (HB67) as well as another design (junior
misers dream). The first receiver was an 80 meter single conversion set
with a crystal controlled converter ahead of it. Similar commerical
designs were the HA350 and the 2B. The HB67 used a 6D10 compactron as
the first mixer/oscillator in the converter section. The MMD receiver
had the 7360 in the front end (NO RF stage) with a first IF of 3300 KHZ.
An RF Q multiplier was used instead of the RF stage. As you mentioned

the oscillator injected into the deflection plates in both cases

# 1369. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 04:01:00 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <OtadnfyNBIdgvk7VnZ2dnUVZ_s_inZ2d@bright.net>
Source record: 4405

N2EY@aol.com wrote:

>
> In the 1951 restructuring, it was renamed "Advanced", and survives to
> this day. When it was first closed to new issues at the end of 1952,
> FCC still kept it on the books. That made a big difference in 1968 and
> 1969 when the IL changes happened, because Advanceds had a lot more
> 'phone space than Generals after those changes.
>
> 73 de Jim, N2EY

This is probably what you mean but no new Advanced Class licenses are
issued any more. If you have one, you can renew indefinitely, but no
more new ones.

Scott
Used ta be an Advanced Class
N0EDV

# 1370. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 07:33:34 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jh2ueF3ab47U3@mid.individual.net>
Source record: 4406

ken scharf wrote:

> Sounds like you're building a receiver with only one tube in it (a 7360)
> and everything else solid state. Then again the 7360 probably makes a
> very good product detector too.

No - the RF amplifier stage is a variable mu pentode, and there are more variable mu valves used in the IF, another 7360 for the product detector, and the rest is solid state. The hybrid approach seemed best - for example, the variable current drawn by the audio stages is /entirely/ isolated from the IF supply, the front end supply and the local oscillator supply. At the moment, it's a single conversion superhet, with a 10.7 MHz IF (because I have 10.7 MHz filters), though I'm considering making it dual conversion, with a very high first IF, to improve the inherent image problems.

C.

# 1371. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 10:42:22 UTC
From: jimmie68@gmail.com
Message-ID: <8e344554-a8d0-4796-ae20-3739a2f7f5ea@z72g2000hsb.googlegroups.com>
Source record: 4408

On Sep 18, 8:56 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Short answer, IGBTs are much better but not as good as MOSFETs.
> In many cases they're good enough that the turn-off tail can be
> ignored with very minor accommodation if any.  In some cases an
> IGBT may be superior than a MOSFET because you don't have to worry
> about the switches RDSon drifting apart with temperature.
>
> Though now days you can buy a 75V 120A 0.0004 Ohm MOSFET in a
> T0-220 package... I guess RDSon isn't much of an issue.
>
> The main problem with both IGBT and regular old bipolar transistors
> in a push-pull circuit is the turn-off tail.  The MOSFET does not
> have a turn-off tail.  There are two classes of IGBT, punch-though
> and non-punch through. The punch-trough devices have better turn-off
> times but are more fragile.  Lately I've been using Trench Field Stop
> IGBT's and they're very good.
>
> There are several means of preventing imbalance of the transformer
> in driven (not self oscillating) converters.  The PWM will adjust
> the on-time to compensate for the tail as it regulates the output
> voltage.  You can sense the differences with a circuit that converts
> time to voltage (a capacitor and a current source) then make the
> correction.
>
> There are clever flux balancing windings that can be added.  One
> Unitrode app note describes how this can be done in the course of
> presenting a half-bridge power converter.  I can't recall the
> document number.
>
> In the half bridge and full bridge sometimes a capacitor in series
> with the primary wdinding  prevents saturation.  I think you could
> build a two capacitor divider across the input voltage and at the
> center connect your transformer centertap lead.  Then as the
> imbalance increases the voltage at the center tap with shift
> to compensate for it. I've seen half bridges built this way...
> might work for a push pull... just guessing as I've never tried it.
>
> A very small gap (0.001-0.003") will prevent saturation if the
> imbalance is minor and not decrease the magnetizing inductance
> too much.  Sometimes any decrease is unwelcome though.
> A distributed gap material like powdered-iron, koolmu, MPP
> or sendust, might be useful if you expect to have flux imbalance
> problems.
>

> Pulse by pulse current limiting will mask the problem, so the
> transformer is in saturation but not far into it and the current
> limit keeps it from destroying the switches.  Kinda risky to rely
> on this alone but it's helpful combined with other measures.
>
> In a current fed converter the transformer may saturate and then
> switches are effectively connected directly to the current source.
> No harm done!  A current fed push-pull is a rugged topology.  The
> VAX8800 computer uses one for its control and start-up power supply.
>
>
>
> >  I was reading up on push-pull topology of switching power supplies
> > and see that they have problems with flux imbalance. I used to work on
> > some power supplies that were push pull when I was in the USAF and the
> > driver transistors were always failing, now I know why. I see that
> > this isnt as much of a problem for FETs, How about IGBTs.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

I work with a couple of pieces of equipment that synthesises a
repetitive waveform by playing back the waeform from a ROM. I thought
I could do something like this to control the on-off timing of the
IGBT. This would set a minimum time between turn on and turn off and
the rest would be controlled by PWM.

# 1372. Re: out-of-phase sides in a push-pull switchmode RF amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 13:05:48 UTC
From: jimmie68@gmail.com
Message-ID: <f210173f-b698-4714-be17-f41f441f6b84@i76g2000hsf.googlegroups.com>
Source record: 4409

On Sep 17, 12:11 pm, spamhog <n1...@hotmail.com> wrote:
> I built a Class D push-pull CW HF TX with 74HC240s providing
> oscillation, buffering, an extra inverter on one side, and two stages
> of current amplification, eventually driving a pair of IRF530
> MOSFETs..
>
> It looks like I struck a good balance even if there was a phase
> offset.
>
> This is what happened.
>
> I turned ann inversting 8-section driver 74HC240 from a single-ended
> oscillator->buffer->4Xamp (N7KSB style), into this push-pull monster:
>
>                          | -inverter-2Xamp-16Xamp-...
> VXO-buffer-buffer-|
>                          |-------------2Xamp-16Xamp-...
>
> From VXO to the 2+2 sections in push-pull current amplifier, all fits
> into one 74HC240, fed at 5Vdc. Then, in a 8X equivalent fanout, I put
> 2 x 74HC240 on each side, fed at 8Vdc. 16 sections of current
> amplification per side provide A LOT of current, already delivered
> over 1W RF, and proved more than sufficient for driving a pair of
> IRF530's in push pull with individually trimmed positive DC bias,
> probably with room for further expansion.
>
> The interesting fact is that there is one extra inverting section on
> one side only.  On that side the signal should have been delayed by
> 20-30ns, the propagation time for one section. At 10MHz this should
> equal 70-110 degrees. In theory this should mean that both push-pull
> sides should spend 110 degrees in high status (MOSFETs conducting),
> and 110 degrees not conducting, leaving only 140 degrees for honest-to-
> G_d pushpullery. :-(
>
> Woe betide such a push-pull...  BUT... with my scope having one
> channel KO, I can't juxtapose the events - I can only combine the
> results in the output transformer.
>
> The result seems like a pretty symmetric waveform, with steep voltage
> peaks on both sides (output balun primary still not tuned). Once
> filtered into a sinusoid, I see about 60W DC going in and about 45-50W
> RF coming out, with negligible second harmonic.
>
> Is this normal?  What did I get wrong? (I.e. got right, but just by

> chance). Would I be wasting my time if I sought more push-pull symmety
> by means of an unbal transformer? I mean somethign like this:
>
>                         |-buffer-2Xamp-...
> VXO-buffer-unbal
>                         |-buffer-2Xamp-...
>
> Any wisdom welcome!
>
> [OK, I am going to have the scope's 2nd channel fixed anyway... :-) ]

As I see it you have a condition where both transistors are off at the same time and both are on at the same time during parts of each cycle. Adding another gate to equalize the propagation time would be the first thing I would do. I would want to have my o'scope working before I started playing with turns on the transformer.

Jimmie

# 1373. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 15:57:49 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B1E6F88991582MDWN@194.177.96.78>
Source record: 4410

This is one advantage of the flyback and asymmetrical forward converters. They will reset if there's enough dead time. So in those cases your ROM circuit would do the trick.

Symmetrical topologies like push-pull, half-bridge and full-bridge can saturate even if there is plenty of dead time. The core is always being driven by the control circuit, so it has no time to relax, If the drive isn't equal and opposite for each half cycle there is an offset which the core accumulates. Eventually it will saturate. unless there is some means to compensate for the imbalance of the drive (like a coupling capacitor.) So here the ROM circuit will not help.

jimmie68@gmail.com wrote in news:8e344554-a8d0-4796-ae20-3739a2f7f5ea@z72g2000hsb.googlegroups.com:

> I work with a couple of pieces of equipment that synthesises a
> repetitive waveform by playing back the waeform from a ROM. I thought
> I could do something like this to control the on-off timing of the
> IGBT. This would set a minimum time between turn on and turn off and
> the rest would be controlled by PWM.
>

# 1374. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 18:03:17 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <33q7d4p6fr34nhoagabagvj2f45hn82cj0@4ax.com>
Source record: 4411

N2EY@aol.com wrote:

>AJ Lake wrote:

>> The treaty applied to 30MHz and below.

>No, it applied to 1000 MHz and below
>back when the Technician was created

Do you have the sources? I couldn't find anything but 30MHz. But I'll
stand corrected since you're certainly the undisputed historian here.

>What mode would a 1950s or 1960s ham use for moonbounce? Aurora?
>Meteor or tropo scatter? Satellite comms?

CW was the best weak signal mode in those days. Your point?

>You can just imagine the reaction from hams who'd worked hard > > to get
>their Advanceds or Extras, then suddenly found the HF 'phone
>bands flooded with Generals and Conditionals who had the same privileges.

>>Probably like having the HF frequencies flooded by no-coders... 8-O

>No, much worse.

Ouch. I guess you don't like no-coders on your HF bands.

>> If I were made boss, the maximum power allowed for any class
>> would be 100W.

>How's anybody gonna work EME with that?

EME is possible with a 100 watts. But CW ain't up to it. It takes
digital signal processing...

>But the Class A didn't disappear. In the 1951 restructuring,
>it was renamed "Advanced",

In a prior post you said the Tech+ will "disappear" because it will be
renewed (and thus renamed) a Tech. Now you say the Class A *didn't
disappear* when it was renamed as the Advanced. Can't have it both
ways...

From your last post:
"The first license class to disappear completely will be the Tech
Plus, because FCC has been renewing them as Technician since April
2000. In another 19 months the last Tech Plus should disappear."

# 1375. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 18:48:09 UTC
From: jimmie68@gmail.com
Message-ID: <a5ec78f3-d683-4228-908d-88c91506bb75@y38g2000hsy.googlegroups.com>
Source record: 4412

On Sep 19, 11:57 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> This is one advantage of the flyback and asymmetrical forward
> converters.  They will reset if there's enough dead time.
> So in those cases your ROM circuit would do the trick.
>
> Symmetrical topologies like push-pull, half-bridge and
> full-bridge can saturate even if there is plenty of dead
> time.   The core is always being driven by the control
> circuit, so it has no time to relax,  If the drive isn't
> equal and opposite for each half cycle there is an offset
> which the core accumulates.  Eventually it will saturate.
> unless there is some means to compensate for the imbalance
> of the drive (like a coupling capacitor.)
> So here the ROM circuit will not help.
>
> jimmi...@gmail.com wrote in news:8e344554-a8d0-4796-ae20-
> 3739a2f7f...@z72g2000hsb.googlegroups.com:
>
>
>
> > I work with a couple of pieces of equipment that synthesises a
> > repetitive waveform by playing back the waeform from a ROM. I thought
> > I could do something like this to control the on-off timing of the
> > IGBT. This would set a minimum time between turn on and turn off and
> > the rest would be controlled by PWM.- Hide quoted text -
>
> - Show quoted text -

I think I get it. Would this explain why in a push-pull topology after
the transistors have been replaced a couple of times the power supply
just keeps failing for no apparent reason?

Are you saying that in other topologies it doesnt saturate or that it
doesnt matter if it does?

Ordered Abe's book.

Jimmie

# 1376. Re: out-of-phase sides in a push-pull switchmode RF amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 20:41:29 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <5aUAk.15471$rV4.10915@newsfe03.iad>
Source record: 4413

<jimmie68@gmail.com> wrote in message
news:f210173f-b698-4714-be17-f41f441f6b84@i76g2000hsf.googlegroups.com...
On Sep 17, 12:11 pm, spamhog <n1...@hotmail.com> wrote:
> I built a Class D push-pull CW HF TX with 74HC240s providing
> oscillation, buffering, an extra inverter on one side, and two stages
> of current amplification, eventually driving a pair of IRF530
> MOSFETs..
>
> It looks like I struck a good balance even if there was a phase
> offset.
>
> This is what happened.
>
> I turned ann inversting 8-section driver 74HC240 from a single-ended
> oscillator->buffer->4Xamp (N7KSB style), into this push-pull monster:
>
> | -inverter-2Xamp-16Xamp-...
> VXO-buffer-buffer-|
> |-------------2Xamp-16Xamp-...
>
> From VXO to the 2+2 sections in push-pull current amplifier, all fits
> into one 74HC240, fed at 5Vdc. Then, in a 8X equivalent fanout, I put
> 2 x 74HC240 on each side, fed at 8Vdc. 16 sections of current
> amplification per side provide A LOT of current, already delivered
> over 1W RF, and proved more than sufficient for driving a pair of
> IRF530's in push pull with individually trimmed positive DC bias,
> probably with room for further expansion.
>
> The interesting fact is that there is one extra inverting section on
> one side only. On that side the signal should have been delayed by
> 20-30ns, the propagation time for one section. At 10MHz this should
> equal 70-110 degrees. In theory this should mean that both push-pull
> sides should spend 110 degrees in high status (MOSFETs conducting),
> and 110 degrees not conducting, leaving only 140 degrees for honest-to-
> G_d pushpullery. :-(
>
> Woe betide such a push-pull... BUT... with my scope having one
> channel KO, I can't juxtapose the events - I can only combine the
> results in the output transformer.
>
> The result seems like a pretty symmetric waveform, with steep voltage
> peaks on both sides (output balun primary still not tuned). Once
> filtered into a sinusoid, I see about 60W DC going in and about 45-50W
> RF coming out, with negligible second harmonic.

>
> Is this normal? What did I get wrong? (I.e. got right, but just by
> chance). Would I be wasting my time if I sought more push-pull symmety
> by means of an unbal transformer? I mean somethign like this:
>
> |-buffer-2Xamp-...
> VXO-buffer-unbal
> |-buffer-2Xamp-...
>
> Any wisdom welcome!
>
> [OK, I am going to have the scope's 2nd channel fixed anyway... :-) ]
As I see it you have a condition where both transistors are off at the
same time and both are on at the same time during parts of each cycle.
Adding another gate to equalize the propagation time would be the
first thing I would do. I would want to have my o'scope working
before I started playing with turns on the transformer.

Jimmie

If I understand you the IRF fets are in push pull. If this is the case then
at no time should both transistors be conductiing at the same time ever.
There should be a dead band between when one transistor conducts and the
other is turning off.

# 1377. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 21:35:54 UTC
From: N2EY@aol.com
Message-ID: <97521a8a-60a9-491f-ba8a-6ee5a16fd92f@x35g2000hsb.googlegroups.com>
Source record: 4414

On Sep 19, 2:03 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >AJ Lake  wrote:
> >> The treaty applied to 30MHz and below.
> >No, it applied to 1000 MHz and below
> >back when the Technician was created
>
> Do you have the sources?

Look up the results of the various World Radio Conferences down
through the years. A good starting place would be the 1947 Atlantic
City conference.

The QST archives are useful if you're a member of ARRL.

> I couldn't find anything but 30MHz.

You need to look further back than the 1980s.

> But I'll
> stand corrected since you're certainly the undisputed historian here.

Works for me!

> >What mode would a 1950s or 1960s ham use for moonbounce? Aurora?
> >Meteor or tropo scatter? Satellite comms?
>
> CW was the best weak signal mode in those days. Your point?

That if a license is supposed to be about experimenting, and Morse
Code/CW is the best mode to use for much of that experimenting, it
made sense to require a basic Morse Code test for that license.

> >You can just imagine the reaction from hams who'd worked hard
> > to get
> >their Advanceds or Extras, then suddenly found the HF 'phone
> >bands flooded with Generals and Conditionals who had the same privileges.

> >>Probably like having the HF frequencies flooded by no-coders... 8-O

> >No, much worse.

> Ouch. I guess you don't like no-coders on your HF bands.

Actually I don't think the 5 wpm Morse Code test was too much to ask.
But that's ancient history now.

What I was saying was that the Class A/Advanceds, and the Extras, of
1952 had been led to believe that the investment they had made in

earning those licenses would continue to be paid off by having more privileges. All the FCC actions up to that time indicated it.

But at the last minute the FCC did the opposite.

> >> If I were made boss, the maximum power allowed for any class
> >> would be 100W.

> >How's anybody gonna work EME with that?
>
> EME is possible with a 100 watts. But CW ain't up to it. It takes
> digital signal processing...

Actually that's not true. Hams have done EME on microwave frequencies with less than 100 watts and CW. But it takes a high gain antenna.

> >But the Class A didn't disappear. In the 1951 restructuring,
> >it was renamed "Advanced",

> In a prior post you said the Tech+ will "disappear" because it will be
> renewed (and thus renamed) a Tech.

That's right. It's been happening since April 2000.

> Now you say the Class A *didn't
> disappear* when it was renamed as the Advanced. Can't have it both
> ways...

There's a difference between a class disappearing and being renamed.

When the last Tech Plus either expires or is renewed as a Tech, the Tech Plus class will have disappeared, having been merged with the Tech. Just like what happened to the Conditional class back in the late 1970s.

But the Class A/Advanced folks were and continue to be kept as a separate license class.

73 de Jim, N2EY

# 1378. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 21:37:11 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <KTUAk.36335$Ep1.21799@bignews2.bellsouth.net>
Source record: 4415

Bob wrote:
> ken scharf wrote:
>
>> Sounds like you're building a receiver with only one tube in it (a 7360)
>> and everything else solid state. Then again the 7360 probably makes a
>> very good product detector too.
>
> No - the RF amplifier stage is a variable mu pentode, and there are more
> variable mu valves used in the IF, another 7360 for the product detector,
> and the rest is solid state. The hybrid approach seemed best - for
> example, the variable current drawn by the audio stages is /entirely/
> isolated from the IF supply, the front end supply and the local oscillator
> supply. At the moment, it's a single conversion superhet, with a 10.7 MHz
> IF (because I have 10.7 MHz filters), though I'm considering making it dual
> conversion, with a very high first IF, to improve the inherent image
> problems.
>
> C.
>
One project that I have been considering would be a re-creation of the classic Drake 2B receiver. This receiver was a dual conversion 80 meter receiver with an additional converter for other bands (making it a triple conversion). The receiver covered 600khz of the 80 meter band (3.5-4.1 mhz), the first IF was 455 khz, and the second IF was 50 khz. I have several sets of IF cans from BC453 receivers (85khz) and a 2.7 khz Collins filter that could be used instead of an IF transformer for the first IF.

I was thinking of using compactrons in the set, a single 6AR11 for the 85 khz IF, a 6D10 for the product detector and bfo, a 6AF11 for the AF stage and S meter amp. A 6AG11 would serve as an AGC tube and AM detector. The second (third?) mixer would be a 6BE6 (455->85), the first and second mixers would be 7360's (expensive!). The first (xtal) hfo would be solid state (maybe a pll), the second hfo (vfo) would also be solid state. I have several nice three gang capacitors from ARC-5 receivers with dial gear drive that would work nicely. The completed set would look more like the 2C because of the dial unless I ever find another Edystone dial. (I had one in the junk box for a few years and sold it on ebay to someone building an HBR. Got a kings ransom for it too).

# 1379. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 22:31:35 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <gLVAk.13934$wr1.13385@newsfe02.iad>
Source record: 4416

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:KTUAk.36335$Ep1.21799@bignews2.bellsouth.net...
> Bob wrote:
>> > I was thinking of using compactrons in the set, a single 6AR11 for the
> 85 khz IF, a 6D10 for the product detector and bfo, a 6AF11 for the AF
> stage and S meter amp. A 6AG11 would serve as an AGC tube and AM
> detector. The second (third?) mixer would be a 6BE6 (455->85), the first
> and second mixers would be 7360's (expensive!). The first (xtal) hfo
> would be solid state (maybe a pll), the second hfo (vfo) would also be
> solid state. I have several nice three gang capacitors from ARC-5
> receivers with dial gear drive that would work nicely. The completed set
> would look more like the 2C because of the dial unless I ever find another
> Edystone dial. (I had one in the junk box for a few years and sold it on
> ebay to someone building an HBR. Got a kings ransom for it too).

The 6JH8 should work as well as the 7360 in a receiver mixer.
Swan changed to the 6JH8, probably for cost reasons.
( http://members.shaw.ca/pacifictv/cartridg.htm )

Not to make you feel bad, Ken... But, I still have an Eddystone
squirreled away for my HBR project. I think the Drake 2C
version makes more sense, though. The plug in coils and
oscillator LO scheme used by W6TC in the HBR
series leaves a bit to be desired.

Pete

## 1380. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 22:48:12 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B1EB51CBA58F2MDWN@194.177.96.78>
Source record: 4417

Hard to say. Sometimes other parts are wounded and cause the transistor on-times to be slightly different. Often a base drive component, usually a resistor, changes value. Some lousy designs just won't work without selected transistors required to match the on-times. It only requires a small imbalance for the push-pull transformer to accumulate enough flux to eventually saturate. If the core is steel or powdered iron which can be magnetized by the fault current of the first failure sometimes (rarely) that causes problems too.

The other topologies we've discussed are more forgiving. BUT if the switch is on for too long, or the voltage applied to the winding too high, causing the flux density that the transformer can sustain to be exceeded, it will saturate. The current will then rise quite rapidly the sparks will fly.

It's just that they're not senstive to slight variations in the on-time of the switch. They reset the transformer completely during the dead time, so they don't accumulate any flux from on-time imbalances.

An exception is current fed symmetrical topologies which are just as senstive to imbalance. If the transformer saturates the fault current is controlled by the inductor feeding the converter and the current gradually increases. So the control circuit can catch the fault before the transistors are turned into lumps of glass.

Some topologies rely on saturation in order to function, like the royer (and some forms of blocking oscillator supplies) where saturation removes the positive feedback base drive and allows the switch to turn off. Nasty things but sometimes useful for low parts count, low-power, converters.

I'm sure you'll find Abe's book helpful. I still re-read it from time to time.

> I think I get it. Would this explain why in a push-pull topology after
> the transistors have been replaced a couple of times the power supply
> just keeps failing for no apparent reason?
>
> Are you saying that in other topologies it doesnt saturate or that it
> doesnt matter if it does?
>
> Ordered Abe's book.
>

> Jimmie
>

# 1381. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 23:00:14 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <98WAk.29779$IB6.23874@bignews8.bellsouth.net>
Source record: 4418

Tio Pedro wrote:
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:KTUAk.36335$Ep1.21799@bignews2.bellsouth.net...
>> Bob wrote:
>>>> I was thinking of using compactrons in the set, a single 6AR11 for the
>> 85 khz IF, a 6D10 for the product detector and bfo, a 6AF11 for the AF
>> stage and S meter amp. A 6AG11 would serve as an AGC tube and AM
>> detector. The second (third?) mixer would be a 6BE6 (455->85), the first
>> and second mixers would be 7360's (expensive!). The first (xtal) hfo
>> would be solid state (maybe a pll), the second hfo (vfo) would also be
>> solid state. I have several nice three gang capacitors from ARC-5
>> receivers with dial gear drive that would work nicely. The completed set
>> would look more like the 2C because of the dial unless I ever find another
>> Edystone dial. (I had one in the junk box for a few years and sold it on
>> ebay to someone building an HBR. Got a kings ransom for it too).
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> The 6JH8 should work as well as the 7360 in a receiver mixer.
> Swan changed to the 6JH8, probably for cost reasons.
> ( http://members.shaw.ca/pacifictv/cartridg.htm )
>
> Not to make you feel bad, Ken... But, I still have an Eddystone
> squirreled away for my HBR project. I think the Drake 2C
> version makes more sense, though. The plug in coils and
> oscillator LO scheme used by W6TC in the HBR
> series leaves a bit to be desired.
>
> Pete
>
>
Well the plug in coil stock used by W6TC are also unobtainium these days too. It IS possible to by raw polystyrene tubing of the right size, and glue onto bases from dead tubes, or tube base plugs (both of which are available from time to time). The APC variable caps are getting rare these days, but good quality ceramic trimmers would sub and these are not TOO hard to find.

I have a bunch of turret tv tuners with the removable strips and also gave thought to building a receiver similar to the HBR's but with toroid core coils switched in the tuner strips. I don't know if the toroid cores were available to W6TC and if he would have used them.

I also have a dial drive from an HRO receiver if I ever get the desire to build something even more antedeluvian!

# 1382. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-19 23:16:33 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <lu98d4h32v50045tr1nfbjcaioogt593mc@4ax.com>
Source record: 4419

N2EY wrote:

>AJ Lake wrote:

>> Do you have the [treaty] sources?

>Look up the results of the various World Radio Conferences down
>through the years. A good starting place would be the 1947 Atlantic
>City conference.

So you don't have a source. Maybe I gave in too quickly... 8-O

>The QST archives are useful if you're a member of ARRL.

I haven't been an ARRL member since the dark days.

>You need to look further back than the 1980s.

I tried hard to find a source to prove me right, but no luck. That's
why I wanted to see your source that proved me wrong.

>That if a license is supposed to be about experimenting, and Morse
>Code/CW is the best mode to use for much of that experimenting, it
>made sense to require a basic Morse Code test for that license.

Wouldn't it be better to give a solder test to an experimenter?

>Actually I don't think the 5 wpm Morse Code test was too much to ask.
>But that's ancient history now.

Is that the old 'weeder' reason or the old 'I had to do it' reason?

>> EME is possible with a 100 watts. But CW ain't up to it. It takes
>> digital signal processing...

>Actually that's not true. Hams have done EME on microwave frequencies
>with less than 100 watts and CW. But it takes a high gain antenna

With digital processing it can be done with a Yagi. You think we ought
to add a separate digital processing test to the Tech?

# 1383. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-20 00:10:25 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <xdXAk.15842$Dj1.8818@newsfe01.iad>
Source record: 4420

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:98WAk.29779$IB6.23874@bignews8.bellsouth.net...
> Tio Pedro wrote:
>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in > Well the plug
>> in coil stock used by W6TC are also unobtainium these days
> too. It IS possible to by raw polystyrene tubing of the right size, and
> glue onto bases from dead tubes, or tube base plugs (both of which are
> available from time to time). The APC variable caps are getting rare
> these days, but good quality ceramic trimmers would sub and these are not
> TOO hard to find.
>

The APC caps (silver plated brass are needed for the LO coils) are
still available. I've read that over one million a month were produced
during WWII. How true that is, I don't know, but it was on a webpage
dedicated to the history of Hammarlund. You have to shop around,
but I've picked up a few dozen for around two bucks each.

The National polystrene coils were becoming scarce by the time
the last HBR ran in QST. Bill (exray) uses Garolite XXX tubing
(phenolic) for his plug in coils; a bit pricy for my tastes. Ted's
coils had Qs of around 150 or so.

I'm going to try using fiberglass tubing--fortunately I have the
poor ham's Q-meter (Heath QM-1) to verify the effectiveness of that
material. A kind soul sent me a few dozen expired tubes to salvage
the bases from. There's always plastic pill bottles, they've been
tried and pass the Q-Meter test.

> I have a bunch of turret tv tuners with the removable strips and also gave
> thought to building a receiver similar to the HBR's but with toroid core
> coils switched in the tuner strips. I don't know if the toroid cores were
> available to W6TC and if he would have used them.
>
W6TC went through great pains to eliminate drift in the LO coils,
I don't know if toroids are the best choice for oscillator coils.

I'm sure you're familiar with the turret tuner in the RCA
TW-2000?

> I also have a dial drive from an HRO receiver if I ever get the desire to
> build something even more antedeluvian!

Now you're talking!!

Pete

# 1384. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-20 03:01:41 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <TEZAk.35885$XT1.31540@bignews5.bellsouth.net>
Source record: 4421

Tio Pedro wrote:
> The National polystrene coils were becoming scarce by the time
> the last HBR ran in QST. Bill (exray) uses Garolite XXX tubing
> (phenolic) for his plug in coils; a bit pricy for my tastes. Ted's
> coils had Qs of around 150 or so.
>

I remember Allied radio and Lafayette radio both carrying those polystyrene coil forms as late as the early 70's (The last HBR article was in '64 IIRC). Those coil forms were NOT made by National Radio, the National coil forms were made of dark brown plastic (bakelite?) or ceramic material. Millen also made some plug in coils that were made of an orange colored bakelite like material. The '67 HB had a novice transmitter (1625 final) that used those coil forms, Allied Radio part numbers given.

I had a few of those coil forms at one time purchased to build a one tube regenerative receiver from the 'boy electrician' book by Alfred Morgan. Barry electronics had the 1H4G tubes for 50 cents back then.

Ocean State Electronics was carrying the polystyrene coil forms a few years ago. They also had some 'cloned' forms that would fit the old National Radio SW3 receiver (same weird 6 pin base).

# 1385. Re: Heterodyne conversion crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-20 16:26:23 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <Xp9Bk.38479$De7.29694@bignews7.bellsouth.net>
Source record: 4422

raypsi wrote:
> Hey Gary,
>
> Rocks aren't cheap here: http://www.icmfg.com/thruhole_crystals.html
> Maybe in 9 land they pave the streets with gold.
> Personally I'd go with a programmable divider or PLL.
>
> Maybe you like retro, then I'd get some old rocks the ones
> you can take apart and grind them down to git's the freq's you need.
> I recall grinding some of these to get them into the novice band back
> 40 yrs ago.
> And putting a pencil mark on the quartz to get them to go down in
> frequency.
> FT243 style can be found here maybe still: http://www.af4k.com/crystals.htm
>
>
> 73 OM
>
> n8zu
>
> On Sep 2, 4:12 pm, Gary@ removenospamandputkf9cm.com wrote:
>> I am looking for some Heterodyne conversion crystals for a receiver I am
>> making.
>> The frequencies are: 5 MHz, 7 MHz, 10.5 MHz, 13.5 MHz, 17.5 MHz and 21.5
>> MHz.
>> The variable mixing frequency will be from 3 to 3.5 MHz. I would prefer all
>> the same type holder.
>>
>> TNX de Gary, KF9CM
>
You can use the same grinding powder that ATM's (amateur Telescope
makers) use to grind mirrors for grinding crystals. You want the fine
stuff #400 or finer. www.gotgrit.com has this stuff cheap.
Grind the crystal against a piece of scrap plate glass. I've had mixed
results, I've moved a few rocks a few hundred khz and I've also killed
some trying to move them just a few hundred hz.

Only grind ONE side of the rock, put a pencil mark on the other so you
don't mix this up. Wash the crystal well after each grinding session
and only handle it by the edges, you don't want your finger sweat or
oils getting on the crystal. Grinding motion should be a figure 8, use
light pressure and don't push down on the middle of the crystal, handle
by the edges while grinding.

If you do kill the crystal, you might be able to get it to start again by light grinding using a different motion. Also try holding the crystal vertical and grind the edges slightly. Measure the thickness (carefully!) with a micrometer all around. If you ground a 'wedge' shape into the rock this will also kill and and the cure is to regrind putting more pressure on the fatter end.

I have quite a few useless FT243 rocks in the junk box, one of these days I'll probably try moving a few of them to a more useful frequency.

BTW some of those 'useless' frequency rocks do multiply out into some ham bands.

A few examples from my junk box:
4845khz -> 29070khz (10 meters)
6050khz -> 18150khz (17 meters)
6025khz -> 18075khz (17 meters)
4785khz -> 28710hkz (10 meters)
5300khz -> 21200hkz (15 meters)

# 1386. Re: Wanted, Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-21 01:19:04 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <%ghBk.34458$rD2.29210@bignews4.bellsouth.net>
Source record: 4423

raypsi wrote:
> On Aug 27, 3:58 pm, K7ITM <k7...@msn.com> wrote:
>> On Aug 26, 12:05 pm, Tim Shoppa <sho...@trailing-edge.com> wrote:
>>
>>
>>
>>> On Aug 26, 2:26 pm, K7ITM <k7...@msn.com> wrote:
>>>> On Aug 26, 10:46 am, Tim Shoppa <sho...@trailing-edge.com> wrote:
>>>> ...
>>>>> The brass-screw-in-a-solenoid is something I just tried in my
>>>>> reproduction of the MMR-40 and I am very impressed with its stability
>>>>> and mechanical simplicity as a PTO. A similar but not identical
>>>>> mechanical design is used in the WA6OTP PTO, I haven't tried it yet.
>>>>> Tim.
>>>> Though not actually PTO if it's a brass screw, right?
>>> Permeability of brass is slightly less than air, which is why the PTO
>>> goes up in frequency as I screw the brass screw in.
>>> It's not an iron-powder slug (which would go down in frequency as it
>>> enters the solenoid) but it's still a PTO.
>>> If you haven't tried them, I highly encourage you look at the PTO in
>>> the MMR-40 and the WA6OTP PTO. Completely 100% homebrewable and I'm
>>> very happy with the results.
>>> Tim.
>> Well, I beg to differ with you about the (main) reason the frequency
>> changes. Consider what happens if you have two coils magnetically
>> coupled and you monitor the inductance of one while you apply a short
>> across the other one. Then consider what you'll see on the inductance
>> meter as you change the coupling between the measured coil and the
>> shorted one. The references I've been able to find so far suggest the
>> permeability of brass is slightly higher than that of air, but I
>> suppose it's a function of the composition of the brass; in any event,
>> I'd bet that the shorted-turn effect is very much larger than the
>> permeability effect with respect to changing the inductance of the
>> oscillator coil.
>>
>> Cheers,
>> Tom
>
> I agree, except Air has no permeability, you can't magnetize air. You
> can't magnetize brass. What you have is a proximity detector. aka
> metal detector.
>
> 73
> n8zu

Brass slug acts as a shorted turn, absorbing rf and decreasing effective inductance. You can tune a circuit with a link coupling coil of a few turns connected to a low ohm value pot!

# 1387. Re: Needed: Cinch 10 pin female socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-21 12:16:42 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <48D63B2A.7070009@bloomer.net>
Source record: 4424

wa2rqy wrote:
> For my power supply which feeds my Gonset G-76.
> Appears that the last owner either removed the plastic pin retainer or
> it fell out.
> Now, there is nothing to support these female pins from wobbling
> around & connector from falling off with poor connections to boot.
>
> The Cinch/Jones model number is S-310-CCT-K
> Any help will be apprechiated in getting this rig back on the air.
>
> Need NOT be new.
> Regard/73.....
> Rich WA2RQY

I searched on Mouser Electronics website. Says the part is obsolete,
but they have a link under the "Quote" section, so maybe they have some
available???

http://www.mouser.com/Search/Refine.aspx?Ntt=*S310CCTK*&N=1323038&Ntx=mode%2bmatchall&Ns=P
_SField&OriginalKeyword=S-310-CCT-K&Ntk=Mouser_Wildcards

Digikey lists the part, but shows a quantity of zero...

http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail?name=CJ210S-ND

One last ditch effort...

http://www.google.com/search?hl=en&q=S-310-CCT-K&btnG=Google+Search&aq=f&oq=

Good luck with the search...this may be a tough one :(

Scott
N0EDV

# 1388. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-21 12:46:54 UTC
From: N2EY@aol.com
Message-ID: <c5661e9b-a347-4b33-bc52-0ca30a2682c8@k7g2000hsd.googlegroups.com>
Source record: 4425

On Sep 19, 7:16 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> N2EY wrote:
> >AJ Lake wrote:
> >> Do you have the [treaty] sources?
> >Look up the results of the various World Radio Conferences down
> >through the years. A good starting place would be the 1947 Atlantic
> >City conference.
>
> So you don't have a source.

No, I do have a source.

Here are the facts:

Amateur radio was first officially recognized as a separate radio service at the Paris radio conference of 1927. As part of the regulations/treaty, all amateurs had to be Morse Code tested.

At the Atlantic City radio conference of 1947, the Morse Code test requirement was modified so that a Morse Code test was not required for amateur licenses that only allowed operation above 1000 MHz. This rule was in effect when the Technician Class license was created by FCC in 1951. There's an article explaining all this in QST for October, 1947.

At the Geneva radio conference of 1959, the requirement was modified so that a Morse Code test was not required for amateur licenses that only allowed operation above 144 MHz. This is explained in a QST article in the issue for March, 1960.

At the radio conference of 1979, commonly called "WARC-79", which resulted in the 30, 17 and 12 meter bands, the requirement was modified so that a Morse Code test was not required for amateur licenses that only allowed operation above 30 MHz. This is explained in a QST article in the issue for February, 1980.

So the USA could not have created the Technician license in 1951 without a code test unless that license had not allowed any operation below 1000 MHz.

> >The QST archives are useful if you're a member of ARRL.
>
> I haven't been an ARRL member since the dark days.

When were these "dark days"?

> >You need to look further back than the 1980s.
>
> I tried hard to find a source to prove me right, but no luck. That's
> why I wanted to see your source that proved me wrong.

It's not about "luck", it's about knowing the history.

> >That if a license is supposed to be about experimenting, and Morse
> >Code/CW is the best mode to use for much of that experimenting, it
> >made sense to require a basic Morse Code test for that license.
>
> Wouldn't it be better to give a solder test to an experimenter?

No. The license is for operating, not building. Anyone can build
whatever equipment they want with no license at all, but to put it on
the air legally requires a license.

> >Actually I don't think the 5 wpm Morse Code test was too much to ask.
> >But that's ancient history now.
>
> Is that the old 'weeder' reason or the old 'I had to do it' reason?

Neither. It's the "reasonable requirement to know what you are doing"
reason.

The basic argument against the code test comes down to this:

Why should anyone have to learn it if they don't intend to use it?
Those who want to use it will learn it on their own, and those who
don't will learn it and not use it.

That same argument can applied to almost anything in the written
tests, though.

For example:

Why should anyone have to learn about VHF/UHF if they only intend to
use HF?

Why should anyone have to learn about solid-state if they only intend
to use tubes?

Why should anyone have to learn about FM, SSTV, RTTY, etc., if they
only intend to use CW, AM or SSB?

Why should anyone have to learn about theory if they only intend to
use manufactured gear?

Why should anyone have to learn about RF exposure safety if they only
intend to use low power?

Etc.

What happens is that the argument, taken to its logical conclusion,
says there should be no real test at all. FCC tried having a radio
service with no test - it didn't work out too well.

73 de Jim, N2EY

# 1389. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-21 14:03:53 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B205C386C5F02MDWN@194.177.96.78>
Source record: 4426

The designer of this power supply did something very wrong.
Using the safety/chassis ground as a power connection to
run 120V loads is dangerous. If you need to power 120V
loads run a neutral line or use a 240/120 transformer.

Safety ground should only be connected to the chassis,
faraday screens and Y-rated capacitors.

Neutral and safety ground eventually tie together so
it seems like an OK thing. It's not. It's a violation
of the NEC, any applicable safety standards and might
on the off chance cause serious injury or death.

> ==============>http://www.realhamradio.com/hvreg.pdf

# 1390. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-21 18:30:57 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jni6rF45o2qU1@mid.individual.net>
Source record: 4427

Tio Pedro wrote:

> The 6JH8 should work as well as the 7360 in a receiver mixer.
> Swan changed to the 6JH8, probably for cost reasons.
> ( http://members.shaw.ca/pacifictv/cartridg.htm )

I've tried both, and the 7360 wins by a long way - it probably proves that "you get what you pay for"! The 7360 gave me useful conversion gain, a spectacularly high intercept, and as low a noise figure as you could ever wish for.

Bob

# 1391. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-21 20:22:57 UTC
From: N2EY@aol.com
Message-ID: <6d2d9390-6da0-4ef7-99c3-56c7b345c223@f36g2000hsa.googlegroups.com>
Source record: 4428

On Sep 21, 2:30 pm, Bob <biasco...@invalid.inv> wrote:
> Tio Pedro wrote:
> > The 6JH8 should work as well as the 7360 in a receiver mixer.
> > Swan changed to the 6JH8, probably for cost reasons.
> > ( http://members.shaw.ca/pacifictv/cartridg.htm)

That's true, but the Swan transceivers weren't using the 7360 as a receiving mixer. They were using it as the balanced modulator in the transmitter section, which is a very different job, and the 6JH8 was a low-cost alternative.

The 6JH8 could probably be used (with mods) in a lot of SSB transmitter projects from the hollowstate era, rather than the 7360.

> I've tried both, and the 7360 wins by a long way - it
> probably proves
> that "you get what you pay for"! The 7360 gave me
> useful conversion gain,
> a spectacularly high intercept, and as low a noise figure
> as you could ever
> wish for.
>
What circuit and values did you use, Bob? Voltages, balanced vs. unbalanced, output and input circuits, etc.?

73 de Jim, N2EY

# 1392. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-21 22:30:04 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <06cdd4dfkueso8hphmlcpv09lpnbsd94kd@4ax.com>
Source record: 4429

N2EY@aol.com wrote:

>AJ Lake <nom...@fakeaddress.com> wrote:

>I do have a [treaty] source. [3 listed]

But if the treaty had not required a code test for the 220 MHz Tech in the license change of 1951, do you think the hams of the day (both inside and outside the FCC) would have allowed a codeless ham to exist? It would have been scary to even express those thoughts aloud in those days, considering what you hear now, 50+ years later...

>> I haven't been an ARRL member since the dark days.
>When were these "dark days"?

Incentive Licensing. I have always voted with my wallet.

>The license is for operating, not building.

The Technician was meant for those who were more interested in VHF/UHF experimentation than HF operating.

>The basic argument against the code test comes down to this:
>Why should anyone have to learn it if they don't intend to use it?

I've heard that argument, but that's not why they quit the code test.

The reasons for a code test that once applied are no longer valid. No more military CW. No more ship to shore CW. No more WW2 ops needed. Ect ect ect. CW is now really obsolete for anything but hobby use. Making involuntary human modems has little value to the government any more.

>What happens is that the argument, taken to its logical conclusion,
>says there should be no real test at all.

The ham test should be about *modern* technology. Testing about past obsolete technology and practices such as tubes, mechanical RTTY, and code ect just doesn't make sense.

# 1393. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 00:08:28 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <vhBBk.38886$Ep1.25547@bignews2.bellsouth.net>
Source record: 4430

N2EY@aol.com wrote:
> On Sep 21, 2:30 pm, Bob <biasco...@invalid.inv> wrote:
>> Tio Pedro wrote:
>>> The 6JH8 should work as well as the 7360 in a receiver mixer.
>>> Swan changed to the 6JH8, probably for cost reasons.
>>> ( http://members.shaw.ca/pacifictv/cartridg.htm)
>
> That's true, but the Swan transceivers weren't using the 7360 as a
> receiving mixer. They were using it as the balanced modulator in the
> transmitter section, which is a very different job, and the 6JH8 was a
> low-cost alternative.
>
> The 6JH8 could probably be used (with mods) in a lot of SSB
> transmitter projects from the hollowstate era, rather than the 7360.
>
>> I've tried both, and the 7360 wins by a long way - it
>> probably proves
>> that "you get what you pay for"! The 7360 gave me
>> useful conversion gain,
>> a spectacularly high intercept, and as low a noise figure
>> as you could ever
>> wish for.
>>
> What circuit and values did you use, Bob? Voltages, balanced vs.
> unbalanced, output and input circuits, etc.?
>
> 73 de Jim, N2EY
Just looked on bay.
Wow, the 7360 is as expensive as 1L6's!

# 1394. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 04:49:48 UTC
From: JB <nospam@goofball.net>
Message-ID: <MtFBk.650$8v5.418@trnddc01>
Source record: 4431

> >The basic argument against the code test comes down to this:
> >Why should anyone have to learn it if they don't intend to use it?
>
Gee, if you don't plan on using the ham license, why bother taking a test?

An old Tech class Elmer that first taught me the code, told me you need it so you will know what repeater you are talking on. I find Morse code useful but I can see how someone who doesn't know it might not find any use for it. Even I can't tell you what it's good for if you don't plan on using it. DUH.

I still have some Vinyl records and even a couple of 45s still. I like some Classical music too even though the people that wrote it are dead, I guess that makes it obsolete. So what's with these Heavy Metal bands where they are still using a Tube guitar amp and half of those guys have one foot in the grave anyway. Even the newest bands are old guys in their 30s with 15-20 year olds freaking all around them. Except for the Girl bands all but doing strip shows. That's kind of entertaining, but everytime they open their mouths, bubble gum and bullsqueek comes out. But then you have all these teen girls who idolize them and dress like strippers and everyone wonders why their teen daughters have all gone astray, but NOOO, they tell us we're OLD and don't know what were talking about because all their girlfriends are pregnant and had 15 abortions when they were 15, so why can't they have fun too. Just because they say the 50 yo migrant worker is cute and says he loves her, why can't she have him for a sleepover. ARGGGGHHE... but I digress. What is it with these NEWBIES telling us - We who know better - That Morse Code is useless.

I'll tell you one thing, E-mail isn't even faster than Morse Code. In fact they should do away with E-mail because it's slower than Morse Code. The fact that someone actually marketed a Blackberry smaller than a full size keyboard must have been tasked to find out how many idiots there are trying to push their lives through a microscopic keyboard when a Straight key you don't even have to look at to find the alphabet. Shouldn't cell phones have made them all obsolete? Come to think of it, these computers should be obsolete too because they are so much slower than cell phones. Or maybe because you can't even talk to people on the phone anymore because they are stuck sifting through their SPAM lists.

Just a few Wild-A** thoughts.

# 1395. Re: Needed: Cinch 10 pin female socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 06:14:54 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.09.22.06.14.54.815876@localhost.localdomain>
Source record: 4432

Hi,

Just the pin or the cap?

I use finishing nails for the pins as I usually break them getting them
out :-\

If it's the little inner plastic cap thing, heatshrink tubing is a nice
fix.

Cheers.

--
Gregg

# 1396. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 07:13:39 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <a9ded45u78cviggah5mi5s504qu75ldu0a@4ax.com>
Source record: 4433

"JB" <nospam@goofball.net> wrote:

>I still have some Vinyl records and even a couple of 45s still.

Hopefully you still have the antique/obsolete equipment to play them.

>I like some Classical music too even though the people that wrote it
>are dead, I guess that makes it obsolete.

Classical music isn't obsolete. But the technology used to store it
can be obsolete (such as wire spool recording) or modern (such as
computer mp3 files).

>So what's with these Heavy Metal bands where they
>are still using a Tube guitar amp...

*Tube* guitar amps are supposed to sound better. Hard for me to tell
with all that intentional distortion they introduce into the music.

My old *tube* receivers still work fine even though they're antiques
(and quite obsolete). But in serious QRM/QRN I have to switch to my
modern rig with the receiver digital processing if I want to complete
the QSO.

> We who know better - That Morse Code is useless.

CW is *not* useless. It's fun. It's all I ever use these days.
Unfortunately the phone bands are often R rated so I left there years
ago. CW is still a gentlemans band and great place to enjoy the CW
*hobby*...

# 1397. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 07:50:46 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jp12hF4bnapU1@mid.individual.net>
Source record: 4434

N2EY@aol.com wrote:

> What circuit and values did you use, Bob? Voltages, balanced vs.
> unbalanced, output and input circuits, etc.?

Balanced throughout! Supply is 130 V, and the deflection plates have a 10 k preset (to give DC balance) with the wiper going to the supply, and the ends connected to potential dividers (68 k and 10 k) to give 15 V at pins 8 and 9. The anodes are connected directly to the primary of a 10.7 MHz IF transformer, with the centre tap of the transformer going to the positive rail through a 220 ohm resistor. There is a fixed capacitor (of 100 pF) from one anode to ground, and the other anode has a parallel combination of 68 pF fixed and a 65 pF trimmer to ground to allow phase balance. Pin 3 (grid 1) has - 1.9 V bias fed through a 470 k resistor and is coupled to the top of an at-frequency tuned circuit - the high input impedance of the valve allows the tuned circuit to be connected without a tap. The bias line has to be well-decoupled (I used a 470 uF electrolytic) to prevent hum. The control grid (pin 2) is connected to the positive supply through a 470 ohm resistor, and is decoupled to ground with 10 nF.

The balanced local oscillator (a pair of 2N3819 FETs) is buffered by a pair of common emitter bipolar transistor stages (I used 2N3866, because I have a lot of them) and fed to the deflection plates in antiphase. IF rejection is roughly 60 dB, conversion gain is 25 dB. You can tune right through the IF frequency /without/ /a/ /whistle/ - which is unique in my experience!

I found the circuit values in the original valve specification, and they seem to be well optimised - I tried various alterations, but always to the detriment of performance.

The Kallitron oscillator is stabilised (in 10 Hz steps) with a huff-and-puff unit based on a PIC, which also provides a frequency readout on an LCD display.

Over the years, I've tried /every/ possible mixer topology, including the modern H-mode switching types (which are astonishingly good), but the 7360 can't be beaten.

The receiver is simply the best that I've ever used, even including some of the high-priced exotica that I saw and used at the BBC Caversham Monitoring department!

Bob

# 1398. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 08:54:16 UTC
From: jimmie68@gmail.com
Message-ID: <a94f0699-bb7b-468d-ac3c-29de6ca1366f@73g2000hsx.googlegroups.com>
Source record: 4435

On Sep 21, 10:03 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> The designer of this power supply did something very wrong.
> Using the safety/chassis ground as a power connection to
> run 120V loads is dangerous.  If you need to power 120V
> loads run a neutral line or use a 240/120 transformer.
>
> Safety ground should only be connected to the chassis,
> faraday screens and Y-rated capacitors.
>
> Neutral and safety ground eventually tie together so
> it seems like an OK thing.  It's not.  It's a violation
> of the NEC, any applicable safety standards and might
> on the off chance cause serious injury or death.
>
>
>
> > ==============>http://www.realhamradio.com/hvreg.pdf- Hide quoted text -
>
> - Show quoted text -

Yeah its a fool killer, Did you notice how they develop the Vcc.
Im sure under the conditions
its designed to be used its safe enough but if you get enough
hams tinkering with it someone might get killed.
David Smith kind of backed out of the project because of this.

I got sidetracked on this project a bit remodeling my bathrooms
but while prowling through my storage shed(junk box) I came across an
old SMPS, it s rated 48 volts at 50 amps. I was going to build a
big FET amp around it but never did. The output of it is just
rectifiers and filters connected to the transformer. There
is a second winding that is rectified and appears to develop
feedback voltage. I was thinking of building a step up transformer
and connecting it back to back with the transformer on
this power supply. I was also having thoughts of just replacing the
transformer with one designed for HV.

# 1399. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 09:17:41 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jp65gF4dv26U1@mid.individual.net>
Source record: 4436

AJ Lake wrote:

>>So what's with these Heavy Metal bands where they
>>are still using a Tube guitar amp...
>
> *Tube* guitar amps are supposed to sound better.

They generally do. They introduce concordant (even order) harmonic
distortion, so are nicer to listen to.

> My old *tube* receivers still work fine even though they're antiques
> (and quite obsolete). But in serious QRM/QRN I have to switch to my
> modern rig with the receiver digital processing if I want to complete
> the QSO.

My valve (tube - U.S>.) receivers far out-perform /any/ semiconductor
receiver. I don't need any digital processing at all.

>> We who know better - That Morse Code is useless.
>
> CW is *not* useless. It's fun.

I can "work the world" on tiny power using CW, whereas I'd have to use
stupid amounts of power to get similar results with SSB. Also, the people
you meet on CW tend to be much more friendly!

C.

# 1400. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 10:14:11 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <4eKBk.18738$Dj1.12594@newsfe01.iad>
Source record: 4437

"Bob" <biascomms@invalid.inv> wrote in message
news:6jp12hF4bnapU1@mid.individual.net...
> N2EY@aol.com wrote:
> > Over the years, I've tried /every/ possible mixer topology, including
> the
> modern H-mode switching types (which are astonishingly good), but the 7360
> can't be beaten.
>
> Bob

Hi Bob

A lot of folks have reported good results using the 6JH8 in place
of the 7360; with a few reporting better linearity. They appear
to be pretty much the same as far as performance. Have you tried
one?

Pete

# 1401. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 11:08:53 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jpcm0F4dqt4U1@mid.individual.net>
Source record: 4438

Tio Pedro wrote:

> A lot of folks have reported good results using the 6JH8 in place
> of the 7360; with a few reporting better linearity. They appear
> to be pretty much the same as far as performance. Have you tried
> one?

Yes I have. The results were disappointing compared to the 7360. Perhaps my values weren't optimised. Maybe I should try again - the 6JH8 is /much/ cheaper!

Bob

# 1402. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 16:11:27 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <aqdfd4dbdj6vcn03ubfbuv33gnqrad8249@4ax.com>
Source record: 4439

Bob <biascomms@invalid.inv> wrote:

>My valve (tube - U.S>.) receivers far out-perform /any/ semiconductor
>receiver.

Your tube receivers outperform *any* semiconductor (solid state -
U.S>.) receiver? I guess that would mean in all ways. That's a big
claim. What receivers might those be?

>I don't need any digital processing at all.

Ah, I'm getting the picture now. You are firmly rooted in the past.
Not unusual with old timers. The problem often is that we think
everyone else should be the same. That's why it took so long to kill
the code test.

>I can "work the world" on tiny power using CW, whereas I'd have to use
>stupid amounts of power to get similar results with SSB.

Less power needed is an advantage of CW. Also less antenna needed. I
run 50 watts to a random wire 8' high (HOA stealth antenna) with quite
satisfactory results. It's not a DX antenna, though I do snag one
every now and then. CW ragchewing's my game, and I seldom fail to
complete a QSO.

>Also, the people you meet on CW tend to be much more friendly!

Yes CW is a gentlemans band.

# 1403. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 16:49:44 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jq0l3F4fgi4U1@mid.individual.net>
Source record: 4440

AJ Lake wrote:

> Bob <biascomms@invalid.inv> wrote:
>
>>My valve (tube - U.S>.) receivers far out-perform /any/ semiconductor
>>receiver.
>
> Your tube receivers outperform *any* semiconductor (solid state -
> U.S>.) receiver? I guess that would mean in all ways. That's a big
> claim. What receivers might those be?

Yes. In every way. Intermodulation, noise floor, selectivity, ultimate sensitivity, every parameter you can think of! The receivers were very carefully designed and constructed by me, (though taking advice from some of the "classic" designs), and have been widely tested against some really serious, exotic receivers!

>>I don't need any digital processing at all.
>
> Ah, I'm getting the picture now. You are firmly rooted in the past.

Not at all. I'm a professional electronics designer, and use the very latest technology when applicable. I haven't seen /any/ digital processor that assists me in actually picking signals out of QRM. I'd rather use tight filtering (RF, IF and AF), and synchronous demodulation when needed. The real trick is a receiver with extreme selectivity (not the bogus pseudo-selectivity given by digital filters with all their nasty artifacts) and a really low noise floor.

> Not unusual with old timers. The problem often is that we think
> everyone else should be the same. That's why it took so long to kill
> the code test.

Absolutely not - I'm happy for you if you're happy with your digital Rice Box - I'd rather use something *I* made and get results that often astonish my friends and colleagues.

>>I can "work the world" on tiny power using CW, whereas I'd have to use
>>stupid amounts of power to get similar results with SSB.

> Less power needed is an advantage of CW. Also less antenna needed. I
> run 50 watts to a random wire 8' high (HOA stealth antenna) with quite
> satisfactory results.

I have a loop over my garden (backyard - U.S.), which is (just) resonant on 7 Mhz and has a reasonable match on other bands. It's basically two long wires above each other, connected by a vertical section at the far end and

with a transformer coupling at the house end (the transformer is 6 metres of UR 67, and the horizontal sections are about 9 metres long). It's not the world's greatest antenna, but works surprisingly well for its small size.

> It's not a DX antenna, though I do snag one every now and then.

Me too!

> CW ragchewing's my game, and I seldom fail to complete a QSO.

My latest game has been working on a /really/ simple and cheap frequency synthesiser and SSB generator that's not too critical in component values and easy to align. It's entirely digital!

>>Also, the people you meet on CW tend to be much more friendly!
>
> Yes CW is a gentlemans band.

Certainly is!

Bob

# 1404. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 16:52:13 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jq0poF4fgi4U2@mid.individual.net>
Source record: 4441

Also - I seldom run more than 10 Watts on any band (unless conditions are really bad) and I seldom fail to complete a QSO!

Bob

## 1405. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 17:26:02 UTC
From: JB <nospam@goofball.net>
Message-ID: <KyQBk.553$Jw.18@nwrddc02.gnilink.net>
Source record: 4442

> CW is *not* useless. It's fun. It's all I ever use these days.
> Unfortunately the phone bands are often R rated so I left there years
> ago. CW is still a gentlemans band and great place to enjoy the CW
> *hobby*...

Which completely proves the point that resistance is not futile. That having the patience to learn a skill will in fact tend to protect a valuable resource from degradation by being flooded with impulsive personalities. The mentality that wants the FCC rules changed so that they can play music, false signals, profanity, deliberately interfere and act out in public, can't really petition for that, but they can petition to make it easier to have that capability and let nature take it's course.

# 1406. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 18:36:46 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <38nfd4tuaqobee7u02p0kk95se7j0i8hsq@4ax.com>
Source record: 4444

Bob <biascomms@invalid.inv> wrote:

>have been widely tested against some really
>serious, exotic receivers!

If you only tested your tube receiver against *some* receivers then
your claim about outperforming *all* SS receivers would be invalid.
'Absolute' statements will get you in trouble most of the time.

>I haven't seen /any/ digital processor
>that assists me in actually picking signals out of QRM.

*You* not having seen any doesn't mean there aren't any.

>pseudo-selectivity given by digital filters with all their nasty artifacts)

Selectivity is not usually my problem. With close neighbors and a low
wire antenna, it's man made noise that is my problem. Digital does
well with this.

>I'm happy for you if you're happy with your digital Rice Box

Yes we have hams here that are also 'Rice Box' prejudiced. Prejudice
for everything produced in Asia is silly these days.

## 1407. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 18:36:47 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <p5pfd4lu68ktebb75e1aot4ltv2osci2di@4ax.com>
Source record: 4443

"JB" <nospam@goofball.net> wrote:

>having the patience to learn a skill will in fact tend to protect a valuable
>resource from degradation by being flooded with impulsive personalities.

The old having to learn the code will keep the whacko's out just
doesn't stand up. The biggest offenders on the SSB 75M mess are code
tested Extras...

# 1408. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 19:13:52 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jq93bF4g1ptU1@mid.individual.net>
Source record: 4445

AJ Lake wrote:

> If you only tested your tube receiver against *some* receivers then
> your claim about outperforming *all* SS receivers would be invalid.

I've tried them against the *very* *best* receivers available today, and they win in /every/ respect. They're actually hybrid receivers - I happily use semiconductors where they're more appropriate (like in synchronous demodulators, audio filters, audio amplifiers, local oscillators and so on), but the really crucial parts - the RF amplifier, first mixer, IF amplifiers and product detectors all use bottles.

There's one crucial parameter that's carefully omitted by most manufacturers, which is the behaviour of their receivers in the presence of strong adjacent frequency interference. The intermodulation, de-sensing and other disasters inherent with semiconductor designs mean that I'll get better results /every/ time.

I've designed /commercial/ solid-state receivers, and there's just *no* *way* to get results as good as can still be obtained from valves in crucial parts of them!

>>I haven't seen /any/ digital processor
>>that assists me in actually picking signals out of QRM.
>
> *You* not having seen any doesn't mean there aren't any.

I've tried most of the stuff on the market, and /none/ of it can really enhance a truly good receiver. They /might/ compensate for the obvious shortcomings of some of the more average receivers!

>>pseudo-selectivity given by digital filters with all their nasty
>>artifacts)
>
> Selectivity is not usually my problem. With close neighbors and a low
> wire antenna, it's man made noise that is my problem. Digital does
> well with this.

I'm in the happy situation that I don't suffer from too much of that, despite living in a city (London). There are some really effective noise-cancelling methods that have been published over the years - one approach I used successfully in my old QTH was the counterpoise method that was published years ago in RADCOM.

>>I'm happy for you if you're happy with your digital Rice Box
>
> Yes we have hams here that are also 'Rice Box' prejudiced.

I'm not prejudiced at all - as soon as Far East Asia produces something even half as good as I can build, I'll save time and effort and buy them! In the interim, I'll continue with what I consider to be the real essence of our hobby, and build the gear myself!

> Prejudice for everything produced in Asia is silly these days.

Not at all - they /still/ can't make a good mobile phone! 8-)

Bob

# 1409. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 20:30:55 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <igTBk.40466$PK.20192@newsfe04.iad>
Source record: 4446

"Bob" <biascomms@invalid.inv> wrote in message
news:6jpcm0F4dqt4U1@mid.individual.net...
> Tio Pedro wrote:
>
>> A lot of folks have reported good results using the 6JH8 in place
>> of the 7360; with a few reporting better linearity. They appear
>> to be pretty much the same as far as performance. Have you tried
>> one?
>
> Yes I have. The results were disappointing compared to the 7360. Perhaps
> my values weren't optimised. Maybe I should try again - the 6JH8 is
> /much/
> cheaper!
>
> Bob
>
Yeah, and I had a shot at a sleeve of them for 60 bucks several months
back :( Unfortunately, they aren't going to get any less expensive as
time passes.

Pete

## 1410. Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 21:37:00 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <xbUBk.1988$eb4.1400@flpi147.ffdc.sbc.com>
Source record: 4447
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

Does anyone know the date codes that Mallory uses on their electrolytic
caps a 1900ufd at 450v? Here's a couple of lines..
CGS192T450X5L3PH
235-8112K
Thanks

--

73
Hank WD5JFR

# 1411. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 22:36:33 UTC
From: JB <nospam@goofball.net>
Message-ID: <R5VBk.727$MN3.244@nwrddc01.gnilink.net>
Source record: 4448

> >having the patience to learn a skill will in fact tend to protect a
valuable
> >resource from degradation by being flooded with impulsive personalities.
>
> The old having to learn the code will keep the whacko's out just
> doesn't stand up. The biggest offenders on the SSB 75M mess are code
> tested Extras...

Sure it does. You can't keep all the nuts out but you could make a big dent in the problem. The fact that so many nuts were whining and crying to be let in was proof of that. Some figured ways around the system. A VE team around here got busted selling licenses. Took their licenses away and called everyone in to retest elsewhere or lose their license too. Most of them got booted out. Yay!

Some of the nuts just blew a head gasket and learned from the other monkeys. Monkey see monkey do. Birds of a feather flock together. I suppose you think the fact that the nonsense is worse now is just society imploding It would probably be even worse but I suspect the only thing in the way of complete animal regression was Riley and the Ham Call Sign. If everybody quit using callsigns though there would be a bloodbath. They have the technology now to get a fix within a few seconds. If there were ever a push it would be an easy roundup. When they got tired of that they would just outlaw ham radio entirely. Up till now they have only made a real effort when vital services are jeopardized. They don't really consider ham radio a vital service anymore because ham radio is losing credibility.

Maybe you can think of some test or hoop besides CW to discourage the people that act out like morons because they lack self-control.

## 1412. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-22 23:20:22 UTC
From: JB <nospam@goofball.net>
Message-ID: <WKVBk.738$MN3.506@nwrddc01.gnilink.net>
Source record: 4449

"Bob" <biascomms@invalid.inv> wrote in message
news:6jq93bF4g1ptU1@mid.individual.net...
> AJ Lake wrote:
>
> > If you only tested your tube receiver against *some* receivers then
> > your claim about outperforming *all* SS receivers would be invalid.
>
> I've tried them against the *very* *best* receivers available today, and
> they win in /every/ respect. They're actually hybrid receivers - I
happily
> use semiconductors where they're more appropriate (like in synchronous
> demodulators, audio filters, audio amplifiers, local oscillators and so
> on), but the really crucial parts - the RF amplifier, first mixer, IF
> amplifiers and product detectors all use bottles.
>
> There's one crucial parameter that's carefully omitted by most
> manufacturers, which is the behaviour of their receivers in the presence
of
> strong adjacent frequency interference. The intermodulation, de-sensing
> and other disasters inherent with semiconductor designs mean that I'll get
> better results /every/ time.
>
> I've designed /commercial/ solid-state receivers, and there's just *no*
> *way* to get results as good as can still be obtained from valves in
> crucial parts of them!
>
> >>I haven't seen /any/ digital processor
> >>that assists me in actually picking signals out of QRM.
> >
> > *You* not having seen any doesn't mean there aren't any.
>
> I've tried most of the stuff on the market, and /none/ of it can really
> enhance a truly good receiver. They /might/ compensate for the obvious
> shortcomings of some of the more average receivers!
>
> >>pseudo-selectivity given by digital filters with all their nasty
> >>artifacts)
> >
> > Selectivity is not usually my problem. With close neighbors and a low
> > wire antenna, it's man made noise that is my problem. Digital does
> > well with this.
>
> I'm in the happy situation that I don't suffer from too much of that,
> despite living in a city (London). There are some really effective

> noise-cancelling methods that have been published over the years - one
> approach I used successfully in my old QTH was the counterpoise method
that
> was published years ago in RADCOM.
>
> >>I'm happy for you if you're happy with your digital Rice Box
> >
> > Yes we have hams here that are also 'Rice Box' prejudiced.
>
> I'm not prejudiced at all - as soon as Far East Asia produces something
even
> half as good as I can build, I'll save time and effort and buy them! In
> the interim, I'll continue with what I consider to be the real essence of
> our hobby, and build the gear myself!
>
> > Prejudice for everything produced in Asia is silly these days.
>
> Not at all - they /still/ can't make a good mobile phone! 8-)
>
> Bob

The biggest issue is manufacturing costs. DSP can do a few neat tricks, but most of those were doable with analog circuits. DSP also adds to the noise floor. What they are really doing is saving money on quality physical components like filtering. I had my TS2000 right next to my TS830 and the 830 sounded so much better I almost took the 2000 back. There seemed to be some high frequency noise that I really couldn't hear but I could sense it and it gave me a headache after a while. It actually FELT noisy. It wasn't until I hooked it up to my SP230 that I honestly couldn't tell the difference in the audio and performance of the 830 and all was well. BUT the TS830 had better adjacent frequency performance because of the 8 pole crystal filters. I would still have that radio but I had to move and made the choice for general coverage. I still have a TS130, and I use that at Field day to swap out those new high dollar big shot radios that can't hack the signal overload. It seems the TS130 uses Bandpass filters in the front end, injection and exciter stages in addition to the 8 pole crystal filters.

There are RF tubes that can do up to 10 meters with plenty of gain and much better overload capabilities than what's out there now. It might cost a fortune to use that quality of filtering in a general coverage receiver, but you COULD build a really first class hybrid that blows away what's out there.

# 1413. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 00:24:16 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <k4cgd4d5mdbihnf0k3agvkovegpp77sa7h@4ax.com>
Source record: 4351

"JB" <nospam@goofball.net> wrote:

> You can't keep all the nuts out but you could make a big dent
>in the problem [with a cose test].

This is an old argument. It is the 'weeder' argument. A code test will weed out all the bad apples. It hasn't worked in the 50+ years I've been a ham. There have always been ham whackos.

In the 60's I listened to a daily net called WCARS (West Coast Amateur Radio Service- called Westcars) on 40M SSB in CA. They suffered daily harassment, carriers, unidentified obscenities ect. 75 meters SSB was bad then also. The IDed offenders were all code tested hams, likely the unidentified nuts also.

> A VE team around here got busted selling licenses.

There has always been some cheating on tests.

In the 50's you could get a Tech license by mail. Your buddy ham could give you the code test and any adult could proctor your exam. I don't have to tell you there were some no-code open-book Techs licensed.

And I think Bash came out in the 70's. That's where they were stealing the FCC exam questions and answers and publishing them in a book. (Questions-answers are SOP now but not then.

>Maybe you can think of some test or hoop besides CW to discourage the people
>that act out like morons because they lack self-control.

Sure. A psychology test...

# 1414. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 00:24:16 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <f48gd49d4qgvsl8nvtnh20suq07j4b8b8h@4ax.com>
Source record: 4450

Bob <biascomms@invalid.inv> wrote:

>I've designed /commercial/ solid-state receivers, and there's just *no*
>*way* to get results as good as can still be obtained from valves in
>crucial parts of them!

The rest of the transceiver industry (other than you) apparently thinks tube embedded HF transceivers are quite obsolete for a wide variety of reasons. Else they would be manufacturing and selling them. Even ham magazines print mostly solid state articles using modern solid state parts, which is right since hams should learn to use modern technology. When they do print a tube article it's usually described as nostalgia.

>I'm not prejudiced at all -

You used the term "Rice Box" to describe your dislike of a whole range of several hundred ham tranceivers. Different manufacturers. Different models. Pure prejudice. Logically you should judge equipment on its individual merits, not by the race of the people who made it.

>I'll continue with what I consider to be the real essence of
>our hobby, and build the gear myself!

Building is but *one* facet of the hobby. Professional engineer hams capable of designing and building transceivers are a but very very tiny part of the hobby...

>Not at all - they [Asians] /still/ can't make a good mobile phone! 8-)

As I said prejudiced...

# 1415. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 00:32:40 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <UcydnYHQR9G3pEXVnZ2dnUVZ_rPinZ2d@bright.net>
Source record: 4352

AJ Lake wrote:

>
> The rest of the transceiver industry (other than you) apparently
> thinks tube embedded HF transceivers are quite obsolete for a wide
> variety of reasons. Else they would be manufacturing and selling them.
> Even ham magazines print mostly solid state articles using modern
> solid state parts, which is right since hams should learn to use
> modern technology. When they do print a tube article it's usually
> described as nostalgia.

Except the Russians. They were still using tube gear in their military back in the mid 80s. Not susecptible to EMP (electromagnetic pulse) from a nuke going off. They may STILL be using tubes...I'm out of the loop since leaving the military in the late 80s...

Probably one reason there aren't more tube projects in QST, etc. is that nobody is left who wants to learn an "obsolete" technology and the old timers aren't going to bother writing about them because all they would hear is bitching about how someone wrote an article on old technology and wasted the pages in QST, etc. Just a guess.

Scott
N0EDV

# 1416. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 00:51:59 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jqst9F4m29pU1@mid.individual.net>
Source record: 4353

JB wrote:

> There are RF tubes that can do up to 10 meters with plenty of gain and
> much better overload capabilities than what's out there now. It might
> cost a fortune to use that quality of filtering in a general coverage
> receiver, but you COULD build a really first class hybrid that blows away
> what's out there.

I did, and it didn't "cost a fortune". I got the crystal filters at a Rally, I had many of the other components in the junk boxes, and I just had to buy a few valves and some coil formers. I built the cases myself, and the internal module boxes are just soldered up PCB material. I found the reduction drive in a junked HRO, and bought the tuning capacitors very cheaply. Frequency indication and relative signal strength are shown on an LCD display.

Bob

# 1417. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 01:10:00 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jqtv3F4i93bU1@mid.individual.net>
Source record: 4354

AJ Lake wrote:

> Bob <biascomms@invalid.inv> wrote:
>
>>I've designed /commercial/ solid-state receivers, and there's just *no*
>>*way* to get results as good as can still be obtained from valves in
>>crucial parts of them!
>
> The rest of the transceiver industry (other than you) apparently
> thinks tube embedded HF transceivers are quite obsolete for a wide
> variety of reasons. Else they would be manufacturing and selling them.

They still do, in /professional/ receivers, though it's becoming rare due to the component cost. I also find that it's much easier and cheaper to go QRO with valves than it is with semiconductors. TV sweep tubes powered many of my HF amplifiers over the years!

> Even ham magazines print mostly solid state articles using modern
> solid state parts, which is right since hams should learn to use
> modern technology. When they do print a tube article it's usually
> described as nostalgia.

Most of them are scared that they'll get sued when some know-nothing-numpty gets bitten by the HT! I use semiconductors where they're appropriate and use valves when they are the best way to get the results I want. I really don't care about your perception of nostalgic engineering - I get better results with my hybrids than are /possible/ with semiconductors alone.

>>I'm not prejudiced at all -
>
> You used the term "Rice Box" to describe your dislike of a whole range
> of several hundred ham transceivers. Different manufacturers. Different
> models. Pure prejudice. Logically you should judge equipment on its
> individual merits, not by the race of the people who made it.

Believe me, I've tried most of them, and some are actually quite good. However, they simply don't match up to the performance of the receivers I have here - I've got my own hybrids, a Plessey PR 155 (probably the best of its genre), a couple of Eddystone boxes and a couple of "Sailor" marine rigs. There's /nothing/ that's come from Asia that can match /any/ of them!

>>I'll continue with what I consider to be the real essence of
>>our hobby, and build the gear myself!
>
> Building is but *one* facet of the hobby. Professional engineer hams

> capable of designing and building transceivers are a but very very
> tiny part of the hobby...

Not over here! Many Hams here are disappointed with the high-priced junk that comes from Asia, and find that it's very satisfying to build and operate proper home made gear. We also have a lot of QRP operators (mostly under 1 Watt) that simply won't be heard by those equipped with the Asian black boxes!

>>Not at all - they [Asians] /still/ can't make a good mobile phone! 8-)

> As I said prejudiced...

Oh dear. Perhaps you can't understand what's been said: The Asians are great at making stuff smaller and cheaper (I used to design for Panasonic), but they're *not* innovators, and everything's made _down_ to a price rather than _up_ to a specification. I find that attitude to be frustrating, and many companies I work for have abandoned that paradigm, and want to produce the best equipment, whatever the cost. That's why Nokia and Motorola make the best mobile phones, and Sony had to buy Ericcson in an effort to play catch-up!

There's no actual prejudice involved at all, just a simple statement of facts!

Bob

# 1418. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 01:58:21 UTC
From: N2EY@aol.com
Message-ID: <db47cabc-6b6a-4bc1-a256-4aaabd4c5d76@d77g2000hsb.googlegroups.com>
Source record: 4355

On Sep 22, 8:32 pm, Scott <acepilotREM...@bloomer.net> wrote:
> AJ Lake wrote:
>
> > The rest of the transceiver industry (other than you) apparently
> > thinks tube embedded HF transceivers are quite obsolete
> > for a wide
> > variety of reasons. Else they would be manufacturing
> > and selling them.

There are several reasons you don't see much manufactured tube gear,
such as a "modern" version of the TS-520S.

The first reason is cost. Getting tubes and tube-type parts made in
the quantities needed would be more expensive than using solid-state.
Manufacturers can't use parts found at hamfests/rallys/on eBay, and
gearing up to have stuff made custom is expensive and chancy. The
complexity of the rig in ways such as needing both high and low
voltage supplies adds to the cost, too.

The second reason is size.

The third and most important reason is that tubes have become electro-
politically incorrect. Admitting that an old technology can do
something - anything - better than a new one just rubs people the
wrong way. Putting a 7360 in the front end of a "modern" transceiver
would be an admission that there has been a better solution around for
decades, and a lot of folks don't want to admit that.

As a case in point, look at the Elecraft K2. When it was introduced
back in 1999, it blew away much more expensive rigs in many
performance criteria. Yet its hardware design is much simpler than
almost anything else on the market that comes close to its
performance. Worse, it turns the usual marketing ideas upside down in
that the basic rig is QRP and CW only *kit*, with 100W, SSB and many
other features as add-on options.

The conventional wisdom of 1999 said there was no market for such a
rig. But with almost no advertising over 6000 have been sold. And the
product line has grown in several directions since 1999, including the
K3, which has sold over 1500 units.

> > Even ham magazines print mostly solid state articles
> > using modern solid state parts,

How many complete multiband multimode transceiver projects have you
seen in US ham magazines in the past 10 or 20 years?

> > which is right since hams should learn to use
> > modern technology.

But who decides what is "modern"?

Is SSB "modern"? It was first used on the air in the 1920s, first used by hams in the early 1930s, and has been commonly used by hams for 60-odd years. Almost no other service uses SSB anymore.

Is AM "modern"? It was first used on the air in 1900, and by 1906 was being heard across the Atlantic. It was common by the 1920s.

How about FM? It's only a couple decades newer than AM. Repeaters were in common use in the land mobile services in the 1950s.

RTTY dates back to WW2, and although the mechanical teleprinters have been replaced by computers the coding and FSK methods used are basically unchanged for half a century plus.

Most of the technologies we hams use have long been abandoned by other services, or are simply kept alive because of the large installed base of users - which is slowly dwindling.

> > When they do print a tube article it's usually
> > described as nostalgia.

You mean history.

> Except the Russians. They were still using tube gear in their
> military
> back in the mid 80s. Not susecptible to EMP (electromagnetic
> pulse)
> from a nuke going off. They may STILL be using tubes...I'm out > of the loop since leaving the military in the late 80s...

EMP was one reason, but there were others. A big one was that they had the industrial capacity to make high quality tubes in huge numbers, but not semiconductors, so the solid-state was reserved for where nothing else would work.

> Probably one reason there aren't more tube projects in QST, etc. > is that
> nobody is left who wants to learn an "obsolete" technology and
> the old
> timers aren't going to bother writing about them because all they
> would
> hear is bitching about how someone wrote an article on old
> technology
> and wasted the pages in QST, etc. Just a guess.

Not exactly.

QST is a general-purpose magazine; the technical stuff largely goes to QEX., which was created just for that purpose because the QST staff got and keeps getting complaints that QST is "too technical" (!).

Way back in 1989 a magazine called "Electric Radio" appeared, and is still going strong. It's a small mag that specializes in hollow-state gear, but there's plenty of interest and homebrewing going on.

Most of all, the internet has made it possible to put far more info out there than could fit in a magazine, without the cost and bother of printing and postage. Even I have a webpage (google my call) with a picture and description of my shack and rig. The resources out there are incredible; the main problem is getting through it all!

73 de Jim, N2EY

# 1419. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 02:16:17 UTC
From: junebug1701 <junebug1701@gmail.com>
Message-ID: <1eec6580-708d-4b06-8c33-78f918cc7e47@m44g2000hsc.googlegroups.com>
Source record: 4356
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

On Sep 22, 4:37 pm, "Henry Kolesnik" <koles...@nojunksbcglobal.net>
wrote:
> Does anyone know the date codes that Mallory uses on their electrolytic
> caps a 1900ufd at 450v?  Here's a couple of lines..
> CGS192T450X5L3PH
> 235-8112K
> Thanks

If I'd have to guess, Hank, I would say that cap was made in the 12th
week of 1981. That's according to the last 4 digits.

James

# 1420. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 02:22:13 UTC
From: N2EY@aol.com
Message-ID: <b8346ab8-8ba4-4349-a9db-a8d5fa3e030e@l43g2000hsh.googlegroups.com>
Source record: 4357

On Sep 22, 8:24 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> "JB" <nos...@goofball.net> wrote:
> > You can't keep all the nuts out but you could make a big dent
> >in the problem [with a cose test].
>
> This is an old argument. It is the 'weeder' argument.

And it has some validity.

> A code test will weed out all the bad apples.

No test will weed out all the bad apples. Particularly not a test that is given one time only and then is good for life.

Consider all the testing that doctors and lawyers go through to get their licenses. Yet there are still some doctors and lawyers who are "bad apples". That doesn't mean the testing should be eliminated since it doesn't do a perfect job!

> It hasn't worked in the 50+ years I've
> been a ham. There have always been ham whackos.

Of course. No test or screening method is perfect.

But it is human nature that people will value something more if they have a personal investment in it.

> In the 60's I listened to a daily net called WCARS (West Coast
> Amateur
> Radio Service- called Westcars) on 40M SSB in CA. They
> suffered daily
> harassment, carriers, unidentified obscenities ect. 75 meters
> SSB was bad then also.

But was it as bad as in, say, the 1990s? As bad as the W6NUT repeater, say?

> The IDed offenders were all code tested hams, likely
> the unidentified nuts also.

But you don't know for sure about the unidentified ones. Plus in those days all US hams were allegedly code tested.

Most of all, note that the bad behavior you cite was all on voice, not CW/Morse Code. The bad apples may have passed a code test at one time or another, but they weren't *using* the mode!

> > A VE team around here got busted selling licenses.

> There has always been some cheating on tests.
>
> In the 50's you could get a Tech license by mail. Your buddy ham > could give you the code test and any adult could proctor your
> exam.

The exam procedure varied over time, and by the mid-1950s the person giving both code and written tests had to be an FCC licensed amateur or commercial operator. But it was all on the honor system.

> I don't
> have to tell you there were some no-code open-book Techs
> licensed.

More importantly, there was the Conditional license until the mid-1970s. The Conditional was a by-mail version of the General, if you lived far enough away from an FCC exam point. From ~1954 to ~1964 the distance was only 75 miles, and there were a *lot* of Conditionals licensed.

One "trick" I heard of, but was never able to verify, was that a would-be ham would give the address of a vacation home, friend or relative in the "Conditional zone" in order to get a Conditional license. Then, after some time passed, the ham would "move" to his/her actual address.

One of the big reasons for all the screaming about "incentive licensing" was that in order to upgrade, Conditionals would have to take tests at FCC offices in front of FCC examiners.
>
> And I think Bash came out in the 70's. That's where they were
> stealing
> the FCC exam questions and answers and publishing them in a
> book.
> (Questions-answers are SOP now but not then.

Yes, the infamous Bash books appeared in the 1970s.

What Bash did was to ask people leaving the exam sessions to recall whatever they could about the questions. He may have even sent folks to exam sessions simply to memorize what they could of the exams. He allegedly paid $1 per question reported. Over time he collected enough bits and pieces to reconstruct the entire exam set.

In doing so, Bash revealed the big secret of the FCC exams: There were only a few different versions of the various tests! That was why there was a 30-day wait to retest.

Some in the FCC wanted to prosecute Bash, but the FCC leadership overruled them. Then budget cuts in the early 1980s forced FCC to create the VE system, and the Q&A became public. Which put Bash out of business.

> >Maybe you can think of some test or hoop besides
> >CW to discourage the people
> >that act out like morons because they lack self-control.
>
> Sure. A psychology test...

It should be remembered that one of the factors which drove "incentive licensing" and other testing initiatives was the cb experience. FCC never imagined that huge numbers of people would simply ignore the rules, but within a few years of its creation, 11 meter CB was simply out of FCC's control. Breaking the rules became much more common than keeping them, and to this day FCC has not gotten the upper hand.

Now, why were hams so well-behaved compared to cbers, even when FCC spent far less resources to enforce the rules on the ham bands?

73 de Jim, N2EY

# 1421. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 03:17:29 UTC
From: JB <nospam@goofball.net>
Message-ID: <ddZBk.828$MN3.308@nwrddc01.gnilink.net>
Source record: 4358

> There has always been some cheating on tests.
>

Maybe you hung out with a different crowd than I did. All my study was out of Engineering classes and ARRL Handbook and License manual for the regs. I was taught the code from a CW op who officiated my Novice exam. We didn't proceed until I could do on the air QSOs in front of him on the club station. And by the way, everyone that I studied and did code practice with, got ham tickets. Even a Mexican kid who barely spoke English. Those that bitched and moaned and threw tantrums over it, didn't want to after all. Glad not to have them.

You are correct that "weeder" tests can't be 100% effective. But if you think that they don't have an impact, then why test at all? If nothing is 100% effective then game is up? No more testing then? They went that route with CB and they couldn't even give people a litteracy test. I.E. getting them to sign a paper stating they would abide by the rules. FCC gave up on it and let it go fallow. The result was dealing dope and scoring hookers in between hetrodynes, pornographic tirades and general orgies of funny noises, wailing and knashing of teeth of the damned. The rest were chased from the band.
>
> >Maybe you can think of some test or hoop besides CW to discourage the people
> >that act out like morons because they lack self-control.
>
> Sure. A psychology test...

So, essentially a pseudoscientific approach? Ridiculous. Lets keep it all above board. Although Psychology is a fascinating study, there are aspects that can lead one astray. If my previous post was a psychology test, I might have failed you.

The whole Psychology idea reminds me of the Russian fake spyware scanner that pops up and tells you that you're infected and you will have to send $50 and download the cleaner to fix you up. You the pay the money, install the program and you're hooked up with endless spyware and adware until you can't boot up anymore and wipe your hard drive and reinstall Windows. No Thanks. You should know that answer cuts both ways senior. Even if you're buying the Psych.

All you have to do is make it difficult for those with short attention spans and little patience. Then follow up with peer pressure. But you have to ignore the tantrums and crying jags and reinforce good behavior. Until parents and governments realize that fact, society will continue to go fallow. Peer pressure is what happens when people begin imitating one

another. That is how whole groups go nuts. It is how great teams succeed. It doesn't happen overnight. It is the result of people pushing the envelope and others tolerating or encouraging it to the point where the behavior becomes commonplace and acceptable and encouraged. I never spent any time on Westcars. Glad I never spent time in Nazi Germany either.

We don't have a code test anymore so it is a moot point. It is left to peer pressure and the skills tests. I will still use Morse Code because it is useful. It won't be useful if no one knows how to do it. It is even more useful because other people who use it aren't anything like your 75m phone Westcars people. This is all the proof I need that it works. But I guess you don't have that proof, do you?

# 1422. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 03:48:08 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <58lgd41mr8rsud4lu0831ehm8sjtsgf0o5@4ax.com>
Source record: 4360

Bob <biascomms@invalid.inv> wrote:

>I also find that it's much easier and cheaper to go
>QRO with valves than it is with semiconductors.

Yes tubes are still quite valid in ham amps.

>TV sweep tubes powered many of my HF amplifiers over the years!

Remember those sweep tube KW amps? What was it, 6 tubes in parallel?

I think my old Swan 350 (nicknamed Swan 3-drifty for good reason) used
sweep tubes. Kept within specs they lasted a long time but they didn't
seem to take much out of resonance abuse.

And my Heath mono-banders, wasn't that a sweep compactron?

Yes I was a sweep tube fan also...

>Believe me, I've tried most of them, [Rice Boxes]

You've tried *most* of hundreds of models and brands? That seems to be
another unsupportable exaggeration.

> We also have a lot of QRP operators (mostly
>under 1 Watt) that simply won't be heard by those equipped with the Asian
>black boxes!

Now you're being funny. Cause you can't be serious, can you...

# 1423. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 03:48:08 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <qfkgd4disr33bemka6qvqoev8s41b0eq42@4ax.com>
Source record: 4361

Scott <acepilotREMOVE@bloomer.net> wrote:

>Except the Russians. They were still using tube gear in their military
>back in the mid 80s. Not susecptible to EMP (electromagnetic pulse)
>from a nuke going off.

I forgot about EMP. And I guess that is a quite valid reason for using tubes in emergency gear. I do remember that EMP was one of the things discussed for ham emergency gear.

I'm sure that our (US) military protects for EMP, but I doubt it is by using tube equipment. Likely something more modern. Fancy Shielding? Perhaps you know the technology currently used?

# 1424. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 03:48:09 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <fvmgd4l4dhorj67fd7kgpmofp7subqarfb@4ax.com>
Source record: 4359

N2EY@aol.com wrote:

>There are several reasons you don't see much manufactured tube gear,
>such as a "modern" version of the TS-520S.

>The first reason is cost.

Agreed. Tranceivers of today are generally much less costly (and have
many more features) than the tube gear of the past. Progress is good.

>The second reason is size.

Agreed. My 100W mobile rig sits on my dashboard. Try that with the
tube gear of the past. Progress is good.

>The third and most important reason is that tubes have
>become electro-politically incorrect.

Tubes are electro-politically incorrect?? Now that is funny. The
conspiracy theory? Black helicopters.... 8-O

>As a case in point, look at the Elecraft K2...
>it blew away much more expensive rigs in many performance criteria.

How many tubes do they use to get this performance?

>But with almost no advertising over 6000 have been sold.

Have you contacted them and suggested your 7360 tube front end idea
for use in the next model of the K2? How long do you think it would
take for them to stop laughing...

# 1425. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 04:21:31 UTC
From: JB <nospam@goofball.net>
Message-ID: <f9_Bk.685$Jw.43@nwrddc02.gnilink.net>
Source record: 4362

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:qfkgd4disr33bemka6qvqoev8s41b0eq42@4ax.com...
> Scott <acepilotREMOVE@bloomer.net> wrote:
>
> >Except the Russians. They were still using tube gear in their military
> >back in the mid 80s. Not susecptible to EMP (electromagnetic pulse)
> >from a nuke going off.
>
> I forgot about EMP. And I guess that is a quite valid reason for using
> tubes in emergency gear. I do remember that EMP was one of the things
> discussed for ham emergency gear.
>
> I'm sure that our (US) military protects for EMP, but I doubt it is by
> using tube equipment. Likely something more modern. Fancy Shielding?
> Perhaps you know the technology currently used?

In Desert Storm they were breaking out KWM-2a to replace radios that were
getting nailed from static in the blowing sand.

# 1426. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 04:22:55 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <utpgd4l53kl4gqfn99jh9cj41jm1eck7b9@4ax.com>
Source record: 4363

"JB" <nospam@goofball.net> wrote:

>> There has always been some cheating on tests.
>Maybe you hung out with a different crowd than I did.

I hang out in the real world. Some people do cheat.

>You are correct that "weeder" tests can't be 100% effective. But if you
>think that they don't have an impact, then why test at all?

Weeder tests keep failures out for *no reason*.
Relevant tests keep failures out for a *good reason*.

> Although Psychology is a fascinating study, there are aspects...

I was being funny with the psychology testing thing. I didn't think
you'd really take me seriously.

>We don't have a code test anymore so it is a moot point.

I still have a code test: If you don't know CW we don't QSO.

>It won't be useful if no one knows how to do it.

Making people learn code just so you will have someone to talk to is a
bad reason.

# 1427. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 04:40:48 UTC
From: JB <nospam@goofball.net>
Message-ID: <kr_Bk.687$Jw.406@nwrddc02.gnilink.net>
Source record: 4364

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:58lgd41mr8rsud4lu0831ehm8sjtsgf0o5@4ax.com...
> Bob <biascomms@invalid.inv> wrote:
>
> >I also find that it's much easier and cheaper to go
> >QRO with valves than it is with semiconductors.
>
> Yes tubes are still quite valid in ham amps.
>
> >TV sweep tubes powered many of my HF amplifiers over the years!
>
> Remember those sweep tube KW amps? What was it, 6 tubes in parallel?
>
> I think my old Swan 350 (nicknamed Swan 3-drifty for good reason) used
> sweep tubes. Kept within specs they lasted a long time but they didn't
> seem to take much out of resonance abuse.
>
> And my Heath mono-banders, wasn't that a sweep compactron?
Yup
>
> Yes I was a sweep tube fan also...
>
At one point, sweep tubes were available cheaply at TV shops so the designs
were at the edge of meltdown. It was neat to have a 350w pep radio, but
that was asking way too much. I saw a lot of Swans and others that would
break into oscillation with the least provocation. I knew one guy who was a
regular customer of the Radio Shack Lifetime tubes. Give me a set of
6146s any day. Conservative designs yet economical. I can always follow up
with 811s for more power. Those guys are still cheap and seem to last
forever. If you have to plug it in the wall anyway, might just as well be
tubes.

# 1428. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 05:53:46 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <murgd4504fae7faffi1oc3mdr7cqf5l33b@4ax.com>
Source record: 4365

N2EY@aol.com wrote:

>Consider all the testing that doctors and lawyers go through to get
>their licenses. Yet there are still some doctors and lawyers who are
>"bad apples".

Exactly. Passing a license test does not prevent bad behavior.

>Most of all, note that the bad behavior you cite was all on voice, not
>CW/Morse Code. The bad apples may have passed a code test at one time
>or another, but they weren't *using* the mode!

Exactly. Passing a code test does not prevent bad behavior.

>The exam procedure varied over time, and by the mid-1950s the person
>giving both code and written tests had to be an FCC licensed amateur
>or commercial operator. But it was all on the honor system.

Not quite correct. I suppose even historians get it wrong sometimes.
Course I knew the mail order license procedure pretty well since I did
it twice, once for Novice and again for Tech.

The following could give the mail order code test:
An Extra, Advanced, or General Class licensee, or
a Commercial Radiotelegraph Operators licensee, or
a Government employee of a manually operated radio telegraph station.

And as I said before *any* adult (at least 21 then) licensed or not
could give the written exam.

>What Bash did was to ask people leaving the exam sessions to recall
>whatever they could about the questions.

Another piece of history I lived. I used Bash for my Advanced.

>Then budget cuts in the early 1980s forced FCC to
>create the VE system, and the Q&A became public.
>Which put Bash out of business.

Interesting how what was called cheating then is now a legit exam...

>Now, why were hams so well-behaved compared to cbers,

Because the hams had to ID? If people know who you are many act
better. And if they didn't ID no one would talk to them. Some did
bootleg though with false calls. I'll admit to bootlegging on CW
before my Novice ticket came. My buddies name was Kent, so I used
K7ENT. It wasn't issued yet so no harm no foul...

# 1429. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 06:30:25 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <ua1hd41pugcira648oageumd3ls1bnf4tu@4ax.com>
Source record: 4366

"JB" <nospam@goofball.net> wrote:

>At one point, sweep tubes were available cheaply at TV shops so the designs
>were at the edge of meltdown.

I worked in a TV shop after high school for gas money. Sweep tubes
were very expensive as tubes went in those days. But I got mine and
most of the rest of my ham parts from old discarded TV sets.

>Swans and others that would >break into oscillation

My Swan was drifty as I said. It was a heat problem with the VFO coil
compartment. The osc was solid state, the only transistor in the whole
rig. I solved it by building an external VFO.

>I knew one guy who was a
>regular customer of the Radio Shack Lifetime tubes.

In the 50s there was a tube company called Major Brand Tubes. They
were mail order and had a lifetime tube guarantee. Their tubes seldom
lasted more than a month in a TV, and they were good to their word.
Send them the old tube and they sent you a new one free, you paid
postage of course. Well after 5 or so replacements most people finally
gave up. A real racket.

>Give me a set of 6146s any day.

I built a single tube 6146 transmitter. I used a voltage quadrupler
direct from the 110V for the high voltage (no HV transformer needed).
It was a simple high powered xtal controlled oscillator. I used it as
a Novice. I don't remember the exact power input now, but it was
probably around 50 watts. I just had to be careful which way I plugged
it in the wall socket. Wrong way and fireworks...

# 1430. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 06:32:28 UTC
From: Franc Zabkar <fzabkar@iinternode.on.net>
Message-ID: <jrmgd49pfv6aeolpo4ruv4sunfcqjbts7e@4ax.com>
Source record: 4367
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

On Mon, 22 Sep 2008 16:37:00 -0500, "Henry Kolesnik"
<kolesnik@nojunksbcglobal.net> put finger to keyboard and composed:

>Does anyone know the date codes that Mallory uses on their electrolytic
>caps a 1900ufd at 450v? Here's a couple of lines..
>CGS192T450X5L3PH
>235-8112K
>Thanks

I have three screw terminal Mallory caps with the following markings:

MALLORY
MADE IN U.S.A
TYPE CGS
30000MFD 15VDC
POS + 85C
MAX SURGE 20VDC
95661319
235-8102K

MALLORY
MADE IN U.S.A
TYPE CGS
29000MFD 15VDC
POS + 85C
MAX SURGE 30VDC
CGS293U025R4C3PH
235-8532K

MALLORY
MADE IN U.S.A
TYPE CGS
21000MFD 16 VDC
POS + 85C
MAX SURGE 20 VDC
CGS213U016R3L
362 8906 56699

They all date from around the early 80s.

Here they are pictured among Sprague caps of the same vintage:
http://www.users.on.net/~fzabkar/screwcaps70.jpg

I'd say that 8112 is a YYWW date code.

- Franc Zabkar
--
Please remove one 'i' from my address when replying by email.

# 1431. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 06:34:38 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jrgvoF4p21mU1@mid.individual.net>
Source record: 4368

AJ Lake wrote:

> I'm sure that our (US) military protects for EMP

No it doesn't and never has. The Russian plans for preemptive strikes included high air bursts over major centres of population to cripple communications. The Soviets /knew/ that the USA was entirely vulnerable to EMP, and still is.

> Perhaps you know the technology currently used?

Yes. We Brits have military communications equipment to deal with EMP - it's /all/ valve based. Trying to protect semiconductor gear against EMP is like trying to protect telephone equipment against lightning - entirely futile!

Bob

# 1432. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 06:42:05 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6jrhdoF4p21mU2@mid.individual.net>
Source record: 4369

AJ Lake wrote:

>>Believe me, I've tried most of them, [Rice Boxes]
>
> You've tried *most* of hundreds of models and brands? That seems to be
> another unsupportable exaggeration.

Not at all - I used to examine equipment for a well-respected ham magazine. Most of the Asian gear is junk.

>> We also have a lot of QRP operators (mostly
>>under 1 Watt) that simply won't be heard by those equipped with the Asian
>>black boxes!
>
> Now you're being funny. Cause you can't be serious, can you...

Funnily enough, I worked a Canadian last night on 14 MHz, with each of us using less than 5 Watts. His signal was entirely inaudible on the extremely expensive Rice Box I've just repaired for a friend, but was clearly audible despite fierce adjacent Italian QRM on my hybrid RX (and on the Plessey).

C.

# 1433. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 09:18:10 UTC
From: N2EY@aol.com
Message-ID: <da44e731-8f2f-4bd1-b7cc-1ace9da71b1a@k30g2000hse.googlegroups.com>
Source record: 4370

On Sep 23, 1:53 am, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >Consider all the testing that doctors and lawyers go through to get
> >their licenses. Yet there are still some doctors and lawyers who are
> >"bad apples".
>
> Exactly. Passing a license test does not prevent bad behavior.

Not exactly. Passing a license test does not prevent *ALL* bad
behavior. Just because a test isn't perfect doesn't mean it has no
effect.

> >Most of all, note that the bad behavior you cite was all on voice, not
> >CW/Morse Code. The bad apples may have passed a code test at one time
> >or another, but they weren't *using* the mode!
>
> Exactly. Passing a code test does not prevent bad behavior.

Not exactly. Passing a code test does not prevent *ALL* bad behavior.
Just because a test isn't perfect doesn't mean it has no effect.

> >The exam procedure varied over time, and by the mid-1950s the person
> >giving both code and written tests had to be an FCC licensed amateur
> >or commercial operator. But it was all on the honor system.

Mid 1960s, not mid 1950s.

> The following could give the mail order code test:
> An Extra, Advanced, or General Class licensee, or
> a Commercial Radiotelegraph Operators licensee, or
> a Government employee of a manually operated radio telegraph station.

Yep.

> And as I said before *any* adult (at least 21 then) licensed or not
> could give the written exam.

And the person had only to sign the form saying the test had been on
the up-and-up.

> >What Bash did was to ask people leaving the exam sessions to recall
> >whatever they could about the questions.
>
> Another piece of history I lived. I used Bash for my Advanced.

Why? The Advanced wasn't very hard.

> >Then budget cuts in the early 1980s forced FCC to
> >create the VE system, and the Q&A became public.
> >Which put Bash out of business.
>
> Interesting how what was called cheating then is now a legit exam...

Been that way for more than 25 years. Complain to FCC; *they* changed
it.
>
> >Now, why were hams so well-behaved compared to cbers,
>
> Because the hams had to ID?

CBers had to ID too. They had licenses, callsigns and everything.
Didn't stop them from misbehaving. Shall we eliminate callsigns and
licenses because they don't prevent all bad behavior?

> If people know who you are many act
> better. And if they didn't ID no one would talk to them.

Why didn't cbers do the same thing?

>�Some did
> bootleg though with false calls. I'll admit to bootlegging on CW
> before my Novice ticket came.

Why? Couldn't you wait?

> My buddies name was Kent, so I used
> K7ENT. It wasn't issued yet so no harm no foul...

It was wrong nonetheless.

The way something goes bad is often not by massive changes but a
little here and a little there. That's how cb went downhill - a little
extra power here, a non-ID there, a cussword here, a skip contact
there, and pretty soon playing by the rules was extinct.

73 de Jim, N2EY

# 1434. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 11:08:31 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <4YGdnXk4d52tU0XVnZ2dnUVZ_gidnZ2d@bright.net>
Source record: 4371

AJ Lake wrote:

.

>

> I'm sure that our (US) military protects for EMP, but I doubt it is by
> using tube equipment. Likely something more modern. Fancy Shielding?
> Perhaps you know the technology currently used?

Nope, no idea. When I was in the Air Force working on aircraft comm radio equipment, "they" told us if a nuke went off, our radios would most likely not work. I don't think fancy shielding would work since all radios I know of have a hole in the shield where RF and EMP can enter. It used to be called the antenna port. Not sure what they call it in "modern" equipment...

When I was still in the USAF, we had our EC-135 and RC-135 aircraft that still had some tube type radios on at least HF and UHF bands, ie 618-T and ARC-34...but...they also had modern radios such as the ARC-190 HF set. I loved the ARC-190 (Collins). It was a nice radio to use and work on. Still see them installed on at least National Guard KC-135s when I get aboard at airshows.

# 1435. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 12:33:58 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6js61hF4s03rU1@mid.individual.net>
Source record: 4372

Scott wrote:

> AJ Lake wrote:
> .
>>
>> I'm sure that our (US) military protects for EMP, but I doubt it is by
>> using tube equipment. Likely something more modern. Fancy Shielding?
>> Perhaps you know the technology currently used?
>
> Nope, no idea. When I was in the Air Force working on aircraft comm
> radio equipment, "they" told us if a nuke went off, our radios would
> most likely not work. I don't think fancy shielding would work since
> all radios I know of have a hole in the shield where RF and EMP can
> enter. It used to be called the antenna port. Not sure what they call
> it in "modern" equipment...

I did some work on simulated EMP back in the 80's (when I was wearing a different engineering hat), and we found that there's /nothing/ that will protect semiconductor equipment against it.

We used very high voltage discharges (at the City University High Voltage Lab in London), and we destroyed all sorts of gear! The original plan was to examine resilience against lightning discharges, but later on the experiments were expanded to cover EMP. We found that "hollow-state" gear could withstand quite a lot of abuse and continue to work, whereas the solid-state equipment would die at the slightest provocation. This had /very/ serious ramifications for the "defence industry".

I've recently found another application that's best serviced with valves ("tubes" - U.S.). A friend of mine is responsible for the maintenance of a number or airport NDB units. The ones they had were solid state, and would quite regularly get fried by static or lightning. Over the last few days we've begun the design of a valve replacement for the "hot" end of these things. It's not difficult to get a few tens of Watts at MF with valves!

Bob

## 1436. boobs webcams

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 13:42:16 UTC
From: tamarmadgecay@gmail.com
Message-ID: <711eaa5d-b2e4-4e39-b9fa-b4f51eb6377f@k30g2000hse.googlegroups.com>
Source record: 4373
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

asian women webcams - adult cam - xxx webcams - sluts webcams - latina women webcams - fucking hardcore webcams - sluts webcams
http://ragdai.info/bdsm-cam-broadcasting.htm

# 1437. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 16:08:48 UTC
From: N2EY@aol.com
Message-ID: <96741f87-a4b1-497c-90c3-aab4a810570e@e39g2000hsf.googlegroups.com>
Source record: 4374

On Sep 22, 11:48 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >There are several reasons you don't see much manufactured tube gear,
> >such as a "modern" version of the TS-520S.
> >The first reason is cost.
>
> Agreed. Tranceivers of today are generally much less costly (and have
> many more features) than the tube gear of the past. Progress is good.

Yes, amateur HF transceivers are generally less expensive to buy new when you adjust for inflation. But at the same time there is far less really-inexpensive new gear, and working on it yourself is much more involved. Plus many "older" SS rigs are difficult to repair because they used custom parts for which the only source is another rig of the same model. A ~50 year old tube rig can be easier to fix up than a ~25 year old SS rig for these reasons.

There is also the fact that in many situations it's better to have good basic performance rather than "features". Many "modern" rigs include lots of "features" because they are easy and inexpensive to include, but lack basic performance that was common 40+ years ago.

So while there is progress in cost and features, it comes at a price in other areas.

>
> >The second reason is size.
>
> Agreed. My 100W mobile rig sits on my dashboard. Try that with the
> tube gear of the past. Progress is good.

But simply making a rig small isn't always progress. For mobile/portable, small is good, but in the ham shack it can be a bother because the displays are hard to read, the controls tiny, and many functions are buried layers-deep in menus.

I'd rather have a rig with a decent front panel than one that fits in a shirt pocket.

> >The third and most important reason is that tubes have
> >become electro-politically incorrect.
>
> Tubes are electro-politically incorrect?? Now that is funny. The
> conspiracy theory? Black helicopters....  8-O

No, it's a fact. Your response proves it.

> >As a case in point, look at the Elecraft K2...
> >it blew away much more expensive rigs in many performance criteria.
>
> How many tubes do they use to get this performance?

None - for the reasons listed above.

You ever use one? I have. They're very good.

> >But with almost no advertising over 6000 have been sold.
>
> Have you contacted them and suggested your 7360 tube front end idea
> for use in the next model of the K2? How long do you think it would
> take for them to stop laughing...

See? You're saying tubes are electro-politically incorrect.

---

btw, the all-time DX record for a radio built by humans is held by a
tube transmitter.

73 de Jim, N2EY

# 1438. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 16:49:50 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <b56id4h9blco76glhi08l9d7lqqcul6nqe@4ax.com>
Source record: 4375

Scott <acepilotREMOVE@bloomer.net> wrote:

>AJ Lake wrote:
>.
>>
>> I'm sure that our (US) military protects for EMP, but I doubt it is by
>> using tube equipment. Likely something more modern. Fancy Shielding?
>> Perhaps you know the technology currently used?
>
>Nope, no idea. When I was in the Air Force working on aircraft comm
>radio equipment, "they" told us if a nuke went off, our radios would
>most likely not work.

What was the plan with no radios operational?
Please tell me there was a plan...

> I don't think fancy shielding would work since
>all radios I know of have a hole in the shield where RF and EMP can
>enter. It used to be called the antenna port. Not sure what they call
>it in "modern" equipment...

I suppose any modern EMP US military countermeasures would be
classified. Maybe Bob in London can tell us...

>When I was still in the USAF, we had our EC-135 and RC-135 aircraft that
>still had some tube type radios on at least HF and UHF bands, ie 618-T
>and ARC-34...but...they also had modern radios such as the ARC-190 HF
>set.

I was working in the manufacturing of new tube type military equipment
(such as the APS 94 side looking radar) into the late 60s. I left the
electronics industry in 68 for an unrelated field and never kept up on
military gear after that.

>I loved the ARC-190 (Collins). It was a nice radio to use and
>work on. Still see them installed on at least National Guard KC-135s
>when I get aboard at airshows.

Collins was always nice gear, either in or out of a military skin.

# 1439. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 21:44:22 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <xZmdnXPLrPil_kTVnZ2dnUVZ_j-dnZ2d@bright.net>
Source record: 4376

AJ Lake wrote:

> Scott <acepilotREMOVE@bloomer.net> wrote:
>
>
>>AJ Lake wrote:

>>
>>Nope, no idea. When I was in the Air Force working on aircraft comm
>>radio equipment, "they" told us if a nuke went off, our radios would
>>most likely not work.
>
>
> What was the plan with no radios operational?
> Please tell me there was a plan...
>

The only plan I knew of was to keep nukes from going off in the first
place. I'd guess that since the EC-135s (Airborne Command Post) had
tube radios for at least HF, they would be able to communicate back to
Washington with those...

# 1440. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-23 22:24:47 UTC
From: hifi-tek <t.hoehler@insightbb.com>
Message-ID: <G8-dnT6szvI68UTVnZ2dnUVZ_tTinZ2d@insightbb.com>
Source record: 4377
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

<snip>

> MALLORY
> MADE IN U.S.A
> TYPE CGS
> 21000MFD 16 VDC
> POS + 85C
> MAX SURGE 20 VDC
> CGS213U016R3L
> 362 8906 56699
>
> They all date from around the early 80s.
>
> Here they are pictured among Sprague caps of the same vintage:
> http://www.users.on.net/~fzabkar/screwcaps70.jpg
>
> I'd say that 8112 is a YYWW date code.

It is a YYMM date code. I have several pieces of vintage medical electronics
equip, and the date codes on the Mallory caps all match closely the date
codes on other parts.

"> MALLORY
> MADE IN U.S.A
> TYPE CGS
> 30000MFD 15VDC
> POS + 85C
> MAX SURGE 20VDC
> 95661319
> 235-8102K

This one is from Feb 1982 - and it's Kosher too. ;-)
>
Remember Sprague's motto?
Don't be vague, ask for Sprague.

a little levity . . . very little . . .
Regards,
Tom

# 1441. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 07:58:43 UTC
From: Franc Zabkar <fzabkar@iinternode.on.net>
Message-ID: <4psjd4lt019nlqvcu9qo9kc93lkdkn3fmn@4ax.com>
Source record: 4378
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
<t.hoehler@insightbb.com> put finger to keyboard and composed:

>> I'd say that 8112 is a YYWW date code.
>
>It is a YYMM date code.

Then how do you account for the "32" in "235-8532K"?

Here are two more caps, with date codes of 7945 and 8102:

MALLORY
MADE IN U.S.A
CGS591T200R3C3PL
590MFD 200VDC
POS + 85C
MAX SURGE 250VDC
1014861-00
235-7945K

MALLORY
BIONOL
CAPACITOR
6MFD
660 VAC
60 HZ NO PCBS
95686701
37NB6606
PROTECTED
C 200 AFC
64591 PTD
8102-1

- Franc Zabkar
--
Please remove one 'i' from my address when replying by email.

# 1442. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 09:47:26 UTC
From: N2EY@aol.com
Message-ID: <47664bc1-cd38-4f89-87eb-6f4c8cad87be@s50g2000hsb.googlegroups.com>
Source record: 4379

On Sep 23, 12:22 am, AJ Lake <nom...@fakeaddress.com> wrote:
> "JB" <nos...@goofball.net> wrote:
> >> There has always been some cheating on tests.
> >Maybe you hung out with a different crowd than I did.
>
> I hang out in the real world. Some people do cheat.

Yes, they do. However it's one thing to know that cheating exists as a general rule, and a very different thing to cite specific instances of cheating. How much actual cheating on the ham license tests went on back in the pre-VE days? How much actually goes on today? I don't think anybody really knows.

I do know this, however:

(in this discussion, the "Conditional distance" is how far from an FCC quarterly exam point you had to live in order to get a license by mail. Distances cited are "air-line" distances, not driving distances)

Before about 1954, the "Conditional distance" was 125 miles, and FCC gave Novice and Tech exams at their offices. Plus if you had a by-mail license and moved to within the "Conditional distance", you had to retest in front of an FCC examiner within 90 days or lose the license.

Then for about ten years the "Conditional distance" was only 75 miles and the retest-if-you-move requirement went away. FCC also made all routine Novice and Tech licenses by-mail, regardless of distance. A considerable amount of CONUS was thus Conditional country.

About 1964 the FCC increased the Conditional distance to 175 miles and increased the number of exam points. Almost none of CONUS was Conditional country after that change.

> >You are correct that "weeder" tests can't be 100% effective. But if you
> >think that they don't have an impact, then why test at all?
>
> Weeder tests keep failures out for *no reason*.
> Relevant tests keep failures out for a *good reason*.

A weeder test can be relevant. And given the number of amateurs actually using Morse Code on the air, it's a relevant test for an amateur radio license.

> > Although Psychology is a fascinating study, there are aspects...

> I was being funny with the psychology testing thing. I didn't think
> you'd really take me seriously.

In a way, a big part of the testing is psychological. If we could trust everyone to learn the technology, operating practices, rules and regs as needed, there'd be no need for a test. By testing, we make people prove they actually learned a few things, even though the testing is far from comprehensive and doesn't test if the person understands the material. But having observed what happens when people are trusted to learn on their own, (cb as one example), testing seems to be a good idea.

73 de Jim, N2EY

## 1443. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 11:17:26 UTC
From: Syl <syl@someplace.com>
Message-ID: <gbd7k6$7ec$2@aioe.org>
Source record: 4380
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

Franc Zabkar a ï¿½crit :
> On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
> <t.hoehler@insightbb.com> put finger to keyboard and composed:
>
>>> I'd say that 8112 is a YYWW date code.
>> It is a YYMM date code.
>
> Then how do you account for the "32" in "235-8532K"?

It IS YYWW (that is year and week)
so....235-8532 means 1985, 32nd week. That is why the K is there...

Syl

# 1444. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 12:31:34 UTC
From: John Byrns <byrnsj@sbcglobal.net>
Message-ID: <byrnsj-3C12B8.07313424092008@newsclstr03.news.prodigy.net>
Source record: 4381
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

In article <gbd7k6$7ec$2@aioe.org>, Syl <syl@someplace.com> wrote:

> Franc Zabkar a crit :
> > On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
> > <t.hoehler@insightbb.com> put finger to keyboard and composed:
> >
> >> I'd say that 8112 is a YYWW date code.
> >> It is a YYMM date code.
> >
> > Then how do you account for the "32" in "235-8532K"?
>
> It IS YYWW (that is year and week)
> so....235-8532 means 1985, 32nd week. That is why the K is there...

I agree that it is YYWW, but I don't understand what you are saying the reason
is that the "K" is there? Why is the "K" there?

--
Regards,

John Byrns

Surf my web pages at, http://fmamradios.com/

# 1445. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 14:58:58 UTC
From: Syl <syl@someplace.com>
Message-ID: <gbdkji$v4m$1@aioe.org>
Source record: 4382
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

John Byrns wrote:
> In article <gbd7k6$7ec$2@aioe.org>, Syl <syl@someplace.com> wrote:
>
>> Franc Zabkar a ï¿½crit :
>>> On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
>>> <t.hoehler@insightbb.com> put finger to keyboard and composed:
>>>
>>>>> I'd say that 8112 is a YYWW date code.
>>>> It is a YYMM date code.
>>> Then how do you account for the "32" in "235-8532K"?
>> It IS YYWW (that is year and week)
>> so....235-8532 means 1985, 32nd week. That is why the K is there...
>
> I agree that it is YYWW, but I don't understand what you are saying the reason
> is that the "K" is there? Why is the "K" there?
>

weeK, to avoid any possible confusion to the date format used.

Syl

# 1446. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 16:27:20 UTC
From: VZ/res0zhra <res0zhra@verizon.net>
Message-ID: <ITtCk.1193$MN3.877@nwrddc01.gnilink.net>
Source record: 4383
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

"Syl" <syl@someplace.com> wrote in message news:gbdkji$v4m$1@aioe.org...
> John Byrns wrote:
>> In article <gbd7k6$7ec$2@aioe.org>, Syl <syl@someplace.com> wrote:
>>
>>> Franc Zabkar a crit :
>>>> On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
>>>> <t.hoehler@insightbb.com> put finger to keyboard and composed:
>>>>
>>>>> I'd say that 8112 is a YYWW date code.
>>>>> It is a YYMM date code.
>>>> Then how do you account for the "32" in "235-8532K"?
>>> It IS YYWW (that is year and week)
>>> so....235-8532 means 1985, 32nd week. That is why the K is there...
>>
>> I agree that it is YYWW, but I don't understand what you are saying the
>> reason
>> is that the "K" is there? Why is the "K" there?
>>
>
> weeK, to avoid any possible confusion to the date format used.
>
> Syl

I have two that have the code 235-6039H. Looks like the 39th weeH of 1960.

# 1447. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 16:48:33 UTC
From: John Byrns <byrnsj@sbcglobal.net>
Message-ID: <byrnsj-E46889.11483324092008@newsclstr03.news.prodigy.net>
Source record: 4384
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

In article <gbdkji$v4m$1@aioe.org>, Syl <syl@someplace.com> wrote:

> John Byrns wrote:
> > In article <gbd7k6$7ec$2@aioe.org>, Syl <syl@someplace.com> wrote:
> >
> >> Franc Zabkar a crit :
> >>> On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
> >>> <t.hoehler@insightbb.com> put finger to keyboard and composed:
> >>>
> >>>> I'd say that 8112 is a YYWW date code.
> >>>> It is a YYMM date code.
> >>> Then how do you account for the "32" in "235-8532K"?
> >> It IS YYWW (that is year and week)
> >> so....235-8532 means 1985, 32nd week. That is why the K is there...
> >
> > I agree that it is YYWW, but I don't understand what you are saying the
> > reason
> > is that the "K" is there? Why is the "K" there?
>
> weeK, to avoid any possible confusion to the date format used.

That's where I figured you were headed with the "K", but typically the YYWW date code, as used on semiconductors for example, is used without a format indicator, in fact IIRC some versions of the YYWW date code scramble the digits in one way or another to obscure their meaning.

I wonder if the "K" might not have another meaning, such as a code to indicate which of several factories the device was produced in? If that is the case, the fact that "K" is the last letter in "week" might just be a coincidence.

--
Regards,

John Byrns

Surf my web pages at, http://fmamradios.com/

# 1448. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 16:56:08 UTC
From: JB <nospam@goofball.net>
Message-ID: <liuCk.1066$Jw.771@nwrddc02.gnilink.net>
Source record: 4385

> >> There has always been some cheating on tests.
> >Maybe you hung out with a different crowd than I did. ï¿½
>
> I hang out in the real world. Some people do cheat.

Yes, they do. However it's one thing to know that cheating exists as a general rule, and a very different thing to cite specific instances of cheating. How much actual cheating on the ham license tests went on back in the pre-VE days? How much actually goes on today? I don't think anybody really knows.

I do know this, however:

(in this discussion, the "Conditional distance" is how far from an FCC quarterly exam point you had to live in order to get a license by mail. Distances cited are "air-line" distances, not driving distances)

Before about 1954, the "Conditional distance" was 125 miles, and FCC gave Novice and Tech exams at their offices. Plus if you had a by-mail license and moved to within the "Conditional distance", you had to retest in front of an FCC examiner within 90 days or lose the license.

Then for about ten years the "Conditional distance" was only 75 miles and the retest-if-you-move requirement went away. FCC also made all routine Novice and Tech licenses by-mail, regardless of distance. A considerable amount of CONUS was thus Conditional country.

About 1964 the FCC increased the Conditional distance to 175 miles and increased the number of exam points. Almost none of CONUS was Conditional country after that change.
>
> >You are correct that "weeder" tests can't be 100% effective. ï¿½But if
you
> >think that they don't have an impact, then why test at all?
>
> Weeder tests keep failures out for *no reason*.
> Relevant tests keep failures out for a *good reason*.

A weeder test can be relevant. And given the number of amateurs actually using Morse Code on the air, it's a relevant test for an amateur radio license.

> > Although Psychology is a fascinating study, there are aspects...

> I was being funny with the psychology testing thing. I didn't think
> you'd really take me seriously.

In a way, a big part of the testing is psychological. If we could trust everyone to learn the technology, operating practices, rules and regs as needed, there'd be no need for a test. By testing, we make people prove they actually learned a few things, even though the testing is far from comprehensive and doesn't test if the person understands the material. But having observed what happens when people are trusted to learn on their own, (cb as one example), testing seems to be a good idea.

73 de Jim, N2EY

Psychology has to do with everything pertaining to human behavior.

Back in my creative writing days, I wrote a research paper on peasant rebellions at the height of the Rodney King beating riots.

In a study of numerous uprisings, rebellions, disturbances and other civil unrest in old times, the conclusion was that the masses indeed require authority and pressure in order to avoid self-destruction. It was found time and again, that these disturbances were most often due to issues of poor morale reinforced within the affected group rather than a righteous rising up against persecution, exploitation or to redress some wrong. Most often the victims were random targets of widespread violent outbursts during these disturbances rather than any defined enemy. Essentially, the Devil has his day. This mentality also carries over to individuals, where perceived pressure or persecution results in school shootings and things like that, where the self-destructive urge is externalized to random targets, or targets of opportunity, rather than a defined enemy. So I suspect this is known to others who can incite such behavior simply by fomenting dissension or planting seeds of discontent, then backing off to watch the outcome in complete safety, thus using crowd and individual Psychology to promote terrorism and destruction as a means to some end.

The whole problem with instituting and maintaining authority though, it how to keep it on the righteous path. In the final analysis, God is the only hope, but only if we spread the word.

# 1449. Filthy Pink Sneakers. By Marina Cooper

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 17:33:04 UTC
From: tyreemand@gmail.com
Message-ID: <416c7efd-bc03-4bf7-8d4a-5a503eca0f7d@r66g2000hsg.googlegroups.com>
Source record: 4386
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

SEXY story. The cute doorman gives me an enigmatic look when I say I'm
here to see you. I am not sure if maybe he thinks I am your daughter.
You are not quite old enough for that, I am not quite young enough -
but we are pretty close. Am I wrong for thinking that's hot?
Definitely. I think... http://ragdai.info/sex-story.html

# 1450. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 17:51:44 UTC
From: maarten@panic.xx.tudelft.nl
Message-ID: <9c8ef$48da7e30$d4549fe0$19473@news1.tudelft.nl>
Source record: 4387
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

In rec.antiques.radio+phono John Byrns <byrnsj@sbcglobal.net> wrote:
> I wonder if the "K" might not have another meaning, such as a code to indicate
> which of several factories the device was produced in? If that is the case, the
> fact that "K" is the last letter in "week" might just be a coincidence.

I'm pretty sure it is a coincidence. I have only ever seen such indication
on some Philips equipment where the letters KW (kalenderweek,
kalenderwoche) are printed in front of a 3 or 4 digit code. Every single
other piece of equipment I ever saw with such a code only has letters with
another meaning in front of or after the date code.

--
Met vriendelijke groet,

Maarten Bakker.

# 1451. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-24 20:11:04 UTC
From: Syl <syl@someplace.com>
Message-ID: <gbe6sp$b4i$1@aioe.org>
Source record: 4388
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

John Byrns a ï¿½crit :
> In article <gbdkji$v4m$1@aioe.org>, Syl <syl@someplace.com> wrote:
>
>> John Byrns wrote:
>>> In article <gbd7k6$7ec$2@aioe.org>, Syl <syl@someplace.com> wrote:
>>>
>>>> Franc Zabkar a ï¿½crit :
>>>>> On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
>>>>> <t.hoehler@insightbb.com> put finger to keyboard and composed:
>>>>>
>>>>>> I'd say that 8112 is a YYWW date code.
>>>>>> It is a YYMM date code.
>>>>> Then how do you account for the "32" in "235-8532K"?
>>>> It IS YYWW (that is year and week)
>>>> so....235-8532 means 1985, 32nd week. That is why the K is there...
>>> I agree that it is YYWW, but I don't understand what you are saying the
>>> reason
>>> is that the "K" is there? Why is the "K" there?
>> weeK, to avoid any possible confusion to the date format used.
>
> That's where I figured you were headed with the "K", but typically the YYWW date
> code, as used on semiconductors for example, is used without a format indicator,
> in fact IIRC some versions of the YYWW date code scramble the digits in one way
> or another to obscure their meaning.
>
> I wonder if the "K" might not have another meaning, such as a code to indicate
> which of several factories the device was produced in? If that is the case, the
> fact that "K" is the last letter in "week" might just be a coincidence.
>

Could well be but so far only found K and was told so.

I was also told the first 3 digits where the factory ID,
can anyone confirm this?

Q: to OP. What country of origin is the cap from?
Could it be a code for country of origin? Like Canada, US...

Syl

# 1452. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 00:13:25 UTC
From: jimmie68@gmail.com
Message-ID: <8be50072-fec8-4449-846e-7b80e17f3712@26g2000hsk.googlegroups.com>
Source record: 4389

On Sep 21, 10:03 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> The designer of this power supply did something very wrong.
> Using the safety/chassis ground as a power connection to
> run 120V loads is dangerous.  If you need to power 120V
> loads run a neutral line or use a 240/120 transformer.
>
> Safety ground should only be connected to the chassis,
> faraday screens and Y-rated capacitors.
>
> Neutral and safety ground eventually tie together so
> it seems like an OK thing.  It's not.  It's a violation
> of the NEC, any applicable safety standards and might
> on the off chance cause serious injury or death.
>
>
>
> > ==============>http://www.realhamradio.com/hvreg.pdf- Hide quoted text -
>
> - Show quoted text -

I never saw where the neutral and ground tied together. The closest
thing I could see was on the HV side of the transformer where one side
is tied to ground. This is OK. I did find in another service manual
where it warned about not having the mounting screws to the power
supply fastened tightly while servicing. Thats almost funny. Probably
a good idea to use this on a GFCI circuit.

Anyway I came across some 120/240 to 240/480 volt 2KVA transformers I
had. This got me thinking that it may be at lot of fun building a
switcher when you had 600VDC at a few amps to switch. Coming up with a
transformer may be fun.

Jimmie

# 1453. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 01:00:55 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <vlIld45sr8bo8rui8f2ur8967p2tpemd9h@4ax.com>
Source record: 4390

N2EY@aol.com wrote:

>A weeder test can be relevant.

The trouble seems to be that we have different ideas of what a "weeder test" means. I could find no specific definition in any reference material, so I'll just no longer use the phrase.

Simply put, there is no reason for a code test in the modern world. If someone wants to use CW he simply learns it or fires up his computer. There once were valid reasons to learn the code, but they haven't existed for decades. That the code test survived so long was simply ham politics.

>By testing, we make people prove they actually learned a few things...

When an 8 year old child can pass the Extra exam, I think you can safely say that it can be passed without *knowing* the electronics theory that it pretends to test for.

>But having observed what happens when people
>are trusted to learn on their own, (cb as one example),

Darn, if only they had started out with a CB code test
all would be well now...

# 1454. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 10:43:14 UTC
From: N2EY@aol.com
Message-ID: <13eb90fc-8a9f-4ef4-b1f3-68328fb1637a@a1g2000hsb.googlegroups.com>
Source record: 4391

On Sep 21, 6:30 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >AJ Lake <nom...@fakeaddress.com> wrote:
> >I do have a [treaty] source. [3 listed]
>
> But if the treaty had not required a code test for the 220 MHz Tech in
> the license change of 1951, do you think the hams of the day (both
> inside and outside the FCC) would have allowed a codeless ham to
> exist?

Maybe. Nobody really knows; the treaty in place at the time prevented
it.

> It would have been scary to even express those thoughts aloud
> in those days, considering what you hear now, 50+ years later...

Not at all. As early as 1936, there were ideas put forth for a
nocodetest amateur license in the pages of QST. (The 1936 idea was for
a basic 5 and 2-1/2 meter license that would allow a low-power local
communications without a code test).

But whenever the discussion came up, the overwhelming majority opposed
the idea.

> >> I haven't been an ARRL member since the dark days.
> >When were these "dark days"?
>
> Incentive Licensing. I have always voted with my wallet.

So for something done 40+ years ago, by folks who are mostly now dead,
you still hold a grudge against the League. Interesting.

Oddly enough, btw, the League was not the only nor the first to
propose a return to a more-progressive license structure in 1963.
There were at least ten proposals, some submitted before ARRL's.

Ironically, the original 1963 ARRL proposal simply called for a return
to the pre-1953 rules where you needed an Advanced or Extra to use
'phone on most of the HF ham bands.

btw, one of the driving forces behind the changes were letters
received by FCC from *nonhams* complaining about the relative techical
ignorance of many hams of the day. Those letters essentially said that
while it used to be that a ham could be counted on to be reasonably
qualified in technical and practical knowledge of radio, the early
1960s version could not. Don't know how true that was but it sure got
FCC's attention.

>
> >The license is for operating, not building.
>
> The Technician was meant for those who were more interested in VHF/UHF
> experimentation than HF operating.

But only the kind of experimentation that requires operating. Anybody
can build practically anything radio they want in their basement; the
license is only needed to put it on the air.

The license is for operating, not building.

IMHO the social-engineering experiment of the Tech license just didn't
work. The original Technician (220 and up only) got very few takers
until 6 and 2 meters were added. This was due in large part to the
fact that, at the time, there was no manufactured ham gear for 220 and
up. And througout its history, most Techs have not been experimenters
in the way that FCC envisioned.

What's worse is that the Tech license, even before it lost its code
test, created a divide in amateur radio between those who had HF and
those who didn't.
>
> >The basic argument against the code test comes down to this:
> >Why should anyone have to learn it if they don't intend to use it?
>
> I've heard that argument, but that's not why they quit the code test.

Yes, it is. It's what's behind every argument given to remove it.
People who were going to use the mode don't care about a basic test of
the mode at all, they just pass it and move on.

> The reasons for a code test that once applied are no longer valid.

*Some* of the reasons are no longer valid.

> No
> more military CW. No more ship to shore CW. No more WW2 ops needed.

Actually, Morse Code was in regular US military use long after WW2. At
least into the late 1960s for the US Navy and into the late 1990s for
the US Coast Guard. And there is still some use of Morse Code for
maritime use. But very, very little.

More important, those reasons aren't the only ones, nor even the major
ones, to have a code test. Even in the old days, most hams would never
be military or commercial radio operators, so why require a code test
for the few who would be?

The main reason to have a test for something to get a ham radio
license is because *hams* do the thing, not because other radio
services do the thing, or do not.

> Ect ect ect. CW is now really obsolete for anything but hobby use.

Did you see the article about the ham who was injured while hiking in the Pacific Northwest, and called for help using CW? Just happened a few days ago. Broken leg in a situation like that is a lot more than "nothing but hobby use".

> Making involuntary human modems has little value to the government any
> more.

Being a skilled radio operator isn't being "an involuntary human modem".

What's really changed is that the idea of needing "radio operators" at all. Look at what has happened to commercial licensing, for example.

> >What happens is that the argument, taken to its logical conclusion,
> >says there should be no real test at all.

> The ham test should be about *modern* technology.

Why? With most ham gear today, there is no real need to understand how the rig works in order to use it. Most have no real tune-up adjustments at all.

And who gets to decide what is "modern" anyway? Radio today is mostly VHF/UHF, not HF. It's mostly channelized, too, and highly automated. Most radios today don't even have a tuning knob!

> Testing about past
> obsolete technology and practices such as tubes, mechanical RTTY, and
> code ect just doesn't make sense.

Who decides what is "obsolete"?

Very few hams today use mechanical RTTY machines, so that technology isn't on the test. But the basic technology - FSK 5-level Baudot-coded RTTY - is still in wide use by hams, and is on the test.

Most hams nowadays only use tubes in high power RF amplifiers. A smaller number use tubes for other applications, including entire tube-based stations, but their number is relatively small. So there are only a few tube questions (if any) on the test.

But Morse Code is in wide use by hams on the ham bands. It's not "obsolete" at all. On the HF bands it is second only to SSB voice and is far ahead of many other modes in popularity.

Shouldn't a license to use an amateur station include tests on what amateurs actually do?

What really killed the code test, IMHO, is that a few people complained loud enough and long enough about it. And if you read their complaints, you see that what they're really saying is that they don't want to learn something they do not intend to use. Particularly something that requires some effort to learn, which cannot be learned by reading a book or watching a video.

I think what *really* burned some folks' bacon was that, since most people don't come to ham radio with Morse Code knowledge, it put all new hams on the same level in one way. The Ph.D and the big bucks businessman found themselves at the same table as the grade-schooler when it came to learning code. Worse, the grade-schooler might very well out-do them! Some folks do not like that kind of equality.

I still remember the reactions of some (not many) older, more-experienced hams when they found out I was a teenage Extra. It *really* bothered them!

73 de Jim, N2EY

# 1455. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 16:11:27 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <todnd4pbd8a25pgphlq2r3mjnhc3d1tq4c@4ax.com>
Source record: 4392

N2EY@aol.com wrote:

>AJ Lake <nom...@fakeaddress.com> wrote:

>So for something done 40+ years ago, by folks who are mostly now dead,
>you still hold a grudge against the League. Interesting.

Voting with my wallet always makes me feel better. And just to make me
feel even better, I read QST for years at the bookstore for free....

>>The Technician was meant for those who were more interested in VHF/UHF
>>experimentation than HF operating.

>The license is for operating, not building.

I kind of set you up on that one. What you thought was my statement
was really your own statement. "The Technician was meant for those
who were more interested in VHF/UHF experimentation than HF
operating." is a direct quote from "The Past 50 Years of Amateur Radio
Licensing part 1" which *you* authored. So in those many paragraphs
you posted in reply, you were arguing with yourself... ;-)

>Being a skilled radio operator isn't being "an involuntary human modem".

Being a skilled radio operator in modern times does not require the
use of an ancient obsolete manual code.

>Who decides what is "obsolete"?

Obsolete is a subjective term. When an object finally becomes obsolete
most people can recognize it, and they upgrade to more modern
products. For example most people would agree that the 20+ tube 1950s
vintage TV set I watched as a kid is now quite obsolete. Likewise a
many tubed 1950s vintage shortwave receiver. Both would still work.
Both could still be used. But both are quite obsolete.

>I still remember the reactions of some (not many) older, more-
>experienced hams when they found out I was a teenage Extra. It
>*really* bothered them!

You misread them. They just didn't like a braggart...

# 1456. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 16:28:56 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <eNSdndRMcrfIIUbVnZ2dnUVZ_oninZ2d@comcast.com>
Source record: 4393

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:todnd4pbd8a25pgphlq2r3mjnhc3d1tq4c@4ax.com...
> N2EY@aol.com wrote:
>
>>AJ Lake <nom...@fakeaddress.com> wrote:
>
>>So for something done 40+ years ago, by folks who are mostly now dead,
>>you still hold a grudge against the League. Interesting.
>
> Voting with my wallet always makes me feel better. And just to make me
> feel even better, I read QST for years at the bookstore for free....
>

Well you should have been kicked out of the bookstore. Most stores that I'm
familiar with will let you thumb through material but will NOT let you stand
there (or sit there) and read something.

# 1457. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 20:08:52 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6k29efF5pq3bU1@mid.individual.net>
Source record: 4394

AJ Lake wrote:

> Being a skilled radio operator in modern times does not require the
> use of an ancient obsolete manual code.
>
>>Who decides what is "obsolete"?
>
> Obsolete is a subjective term.

CW /certainly/ isn't obsolete! I can make QSOs with just a few Watts that you could only /dream/ of achieving with /Kilowatts/ - and it can only be done with CW!

Bob

# 1458. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 21:39:30 UTC
From: JB <nospam@goofball.net>
Message-ID: <myTCk.1496$MN3.859@nwrddc01.gnilink.net>
Source record: 4395

"Bob" <biascomms@invalid.inv> wrote in message
news:6k29efF5pq3bU1@mid.individual.net...
> AJ Lake wrote:
>
> > Being a skilled radio operator in modern times does not require the
> > use of an ancient obsolete manual code.
> >
> >>Who decides what is "obsolete"?
> >
> > Obsolete is a subjective term.
>
> CW /certainly/ isn't obsolete! I can make QSOs with just a few Watts that
> you could only /dream/ of achieving with /Kilowatts/ - and it can only be
> done with CW!
>
> Bob

I find it calming and even kind of cool that I can walk around the house and follow a QSO in CW without having to carry a laptop and battery pack on my back to translate. I can even copy it easier than some people's voices with 5 times the power. But I can see how some might want everyone to think it's obsolete or even have us all executed for our insolence against the revolution!

What you have to realize, is that there are those "out there" who would consider HAM RADIO to be OBSOLETE because we don't pay for airtime.

The code test is no more! Viva La Revolucione! So now the war should be over!

So now life should go on. People should be allowed to use voice, or learn morse code, talk like computers, go have a sex change, jump off the Golden Gate bridge, run for president, or whatever they feel like as long as the taxpayer doesn't have to foot the bill.

# 1459. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 23:19:28 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <hd5od4p66d4dcktp4nf11soua1dqo6029k@4ax.com>
Source record: 4396

"Dee Flint" <deeflint01@comcast.net> wrote:

>Well you should have been kicked out of the bookstore. Most stores that I'm
>familiar with will let you thumb through material but will NOT let you stand
>there (or sit there) and read something.

The Barnes and Noble in my town actually provides chairs for you to
sit and read magazines and books. Many of the chairs are overstuffed.
I would say they have a different philosophy than your bookstores.

And I think B&N know what they are doing since I seldom leave there
without buying at least $30 worth. More if the XYL is along.

My QST boycott is purely personal satisfaction, not financial.

My local ham store once complained that I was looking too long at the
magazine rack. (It might have been a QST.) Over the years I had bought
several $1000 in ham rigs. Being shortsighted has cost them thousands
more in business since I still go there to look at the rigs, but now
do my buying online .

Again I vote with my wallet, because it makes *me* feel better. I
don't have any delusions that it really bothers the businesses.

# 1460. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-25 23:38:47 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B24BDB12F6522MDWN@194.177.96.78>
Source record: 4397

I meant in this design...
http://www.realhamradio.com/hvreg.pdf

A safety ground connection is used for
120V loads because there's no neutral
taken from the AC line connection.

They should have used a four pole connector
and run a neutral as well as ground to the
power supply.

The ground and neutral are tied together
at your service entry.

You could connect two 120/240 transformers with
the primaries in parallel and the secondaries in
series. Then you'd have 480AC source which makes
a decent input to a doubler for about 1200VDC output.

There's nothing wrong with blood and thunder supplies
except the weight and the stored energy. If the parts
are available the cost factor might win out.

> I never saw where the neutral and ground tied together. The closest
> thing I could see was on the HV side of the transformer where one side
> is tied to ground. This is OK. I did find in another service manual
> where it warned about not having the mounting screws to the power
> supply fastened tightly while servicing. Thats almost funny. Probably
> a good idea to use this on a GFCI circuit.
>
> Anyway I came across some 120/240 to 240/480 volt 2KVA transformers I
> had. This got me thinking that it may be at lot of fun building a
> switcher when you had 600VDC at a few amps to switch. Coming up with a
> transformer may be fun.
>
> Jimmie
>

# 1461. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 02:36:38 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <PIGdnRn1IPhe10HVnZ2dnUVZ_uqdnZ2d@comcast.com>
Source record: 4398

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:hd5od4p66d4dcktp4nf11soua1dqo6029k@4ax.com...
> "Dee Flint" <deeflint01@comcast.net> wrote:
>
>>Well you should have been kicked out of the bookstore. Most stores that
>>I'm
>>familiar with will let you thumb through material but will NOT let you
>>stand
>>there (or sit there) and read something.
>
> The Barnes and Noble in my town actually provides chairs for you to
> sit and read magazines and books. Many of the chairs are overstuffed.
> I would say they have a different philosophy than your bookstores.
>

Even Barnes & Noble will object if you read an entire magazine or entire
book. They are not a library but a business. The chairs and atmosphere are
so you can SAMPLE the reading material not spend the day reading.

# 1462. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 03:15:51 UTC
From: jimmie68@gmail.com
Message-ID: <47e93977-6d39-4023-9f66-7ec44501e88f@25g2000prz.googlegroups.com>
Source record: 4399

On Sep 25, 7:38 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> I meant in this design...http://www.realhamradio.com/hvreg.pdf
>
> A safety ground connection is used for
> 120V loads because there's no neutral
> taken from the AC line connection.
>
> They should have used a four pole connector
> and run a neutral as well as ground to the
> power supply.
>
> The ground and neutral are tied together
> at your service entry.
>
> You could connect two 120/240 transformers with
> the primaries in parallel and the secondaries in
> series.  Then you'd have 480AC source which makes
> a decent input to a doubler for about 1200VDC output.
>
> There's nothing wrong with blood and thunder supplies
> except the weight and the stored energy.  If the parts
> are available the cost factor might win out.
>
>
>
> > I never saw where the neutral and ground tied together. The closest
> > thing I could see was on the HV side of the transformer where one side
> > is tied to ground. This is OK. I did find in another service manual
> > where it warned about not having the mounting screws to the power
> > supply fastened tightly while servicing. Thats almost funny. Probably
> > a good idea to use this on a GFCI circuit.
>
> > Anyway I came across some 120/240 to 240/480 volt 2KVA transformers I
> > had. This got me thinking that it may be at lot of fun building a
> > switcher when you had 600VDC at a few amps to switch. Coming up with a
> > transformer may be fun.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

I agree, I understand the commercial version of this has been
redesigned hopefully addressing some of the issues you mentioned.

I had given some thought to using the transformers as you discribe but for right now my purpose is to learn abut and build a switching power supply.

Jimmie

# 1463. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 04:28:17 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <vonod49c0ct1brj6q1rkrqujqn257ul180@4ax.com>
Source record: 4400

"Dee Flint" <deeflint01@comcast.net> wrote:

>They [B&N] are not a library but a business.

B&N is a very successful business. When they think the 'library'
chairs are losing them money, the chairs will be removed.

>The chairs and atmosphere are so you can SAMPLE the reading
>material not spend the day reading.

I *sampled* QST and *bought* another magazine or book. The bottom line
$$ for B&N was the same or more. Your tears are for the wrong entity.
B&N made money because I was drawn to their 'free sample' QST
magazine. QST is the one who lost money, but then that's what voting
with your wallet is all about...

# 1464. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 04:36:32 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <o9pod4t90hi97ur42ch3sn52c0iqv0rtiv@4ax.com>
Source record: 4301

"JB" <nospam@goofball.net> wrote:

>I find it calming and even kind of cool that I can walk around the house and
>follow a QSO in CW

I use wireless headphones when working CW as I find the corded
headphones very confining. Also I can hit the sandbox or icebox while
the other guy is transmitting.

Wired headphones are (almost) obsolete...

# 1465. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 05:02:20 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <q5qod4p72h0u10v23a59e1ob6hkte8n7d8@4ax.com>
Source record: 4302

Bob <biascomms@invalid.inv> wrote:

>CW /certainly/ isn't obsolete!

CW is quite obsolete in the commercial radio world. However I agree CW still can be fun to use in the ham radio hobby.

>I can make QSOs with just a few Watts...

I would agree that CW works better than most other modes under adverse conditions. That's one of the reasons I've been using it for so many years. My HOA required stealth antenna is a very poor radiator, and even though I'm running 50 watts, my ERP is probably just a couple of watts...

# 1466. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 16:20:03 UTC
From: JB <nospam@goofball.net>
Message-ID: <TY7Dk.36$kI6.6@nwrddc01.gnilink.net>
Source record: 4303

> >They [B&N] are not a library but a business.
>
> B&N is a very successful business. When they think the 'library'
> chairs are losing them money, the chairs will be removed.
>
> >The chairs and atmosphere are so you can SAMPLE the reading
> >material not spend the day reading.
>
> I *sampled* QST and *bought* another magazine or book. The bottom line
> $$ for B&N was the same or more. Your tears are for the wrong entity.
> B&N made money because I was drawn to their 'free sample' QST
> magazine. QST is the one who lost money, but then that's what voting
> with your wallet is all about...

Perhaps it is your hope that Amateur Radio not be represented or supported?
Perhaps only by the FCC?

I support ARRL because without them we would have been squeezed off the air
a long time ago. The ARRL is full of imperfect people though, and we need
to help out rather than throw monkey wrenches. I don't base my support on
freebies. Germany went fascist for the perks and went to hell over it.

# 1467. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 16:31:48 UTC
From: JB <nospam@goofball.net>
Message-ID: <U78Dk.37$kl6.30@nwrddc01.gnilink.net>
Source record: 4304

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:o9pod4t90hi97ur42ch3sn52c0iqv0rtiv@4ax.com...
> "JB" <nospam@goofball.net> wrote:
>
> >I find it calming and even kind of cool that I can walk around the house
and
> >follow a QSO in CW
>
> I use wireless headphones when working CW as I find the corded
> headphones very confining. Also I can hit the sandbox or icebox while
> the other guy is transmitting.
>
> Wired headphones are (almost) obsolete...

I have remote speakers throughout the house. I have a long mic cord that goes anywhere but the kitchen. It occurs to me that a keyed 1kc tone might be the quick answer though. Software can be brought up in a couple of places to control the radio. Wireless mic and key are the next project.

# 1468. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 16:34:49 UTC
From: JB <nospam@goofball.net>
Message-ID: <Ja8Dk.39$kI6.9@nwrddc01.gnilink.net>
Source record: 4305

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:q5qod4p72h0u10v23a59e1ob6hkte8n7d8@4ax.com...
> Bob <biascomms@invalid.inv> wrote:
>
> >CW /certainly/ isn't obsolete!
>
> CW is quite obsolete in the commercial radio world. However I agree CW
> still can be fun to use in the ham radio hobby.
>
> >I can make QSOs with just a few Watts...
>
> I would agree that CW works better than most other modes under adverse
> conditions. That's one of the reasons I've been using it for so many
> years. My HOA required stealth antenna is a very poor radiator, and
> even though I'm running 50 watts, my ERP is probably just a couple of
> watts...

Actually, a lot of third world countries still use CW for distress calls,
but who wants to get pulled off course to rescue a bunch of boat people?

## 1469. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 16:49:09 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <la4qd45k3vl0tjh7fgmd9g2k6n6b7rm6d0@4ax.com>
Source record: 4306

"JB" <nospam@goofball.net> wrote:

>Perhaps it is your hope that Amateur Radio not be represented or supported?

ARRL is just one ham organization that tries to influence the FCC.
There are others. I'm sure that they would be happy to step in should
my personal boycott of ARRL become successful...

## 1470. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 16:49:09 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <5d4qd4dj23r93po7089jjd7fg487r2094j@4ax.com>
Source record: 4307

"JB" <nospam@goofball.net> wrote:

>a lot of third world countries still use CW for distress calls,

Some 3rd world countries also still use animals for plowing.

# 1471. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 17:36:54 UTC
From: JB <nospam@goofball.net>
Message-ID: <W49Dk.89$kI6.49@nwrddc01.gnilink.net>
Source record: 4308

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:la4qd45k3vl0tjh7fgmd9g2k6n6b7rm6d0@4ax.com...
> "JB" <nospam@goofball.net> wrote:
>
> >Perhaps it is your hope that Amateur Radio not be represented or
supported?
>
> ARRL is just one ham organization that tries to influence the FCC.
> There are others. I'm sure that they would be happy to step in should
> my personal boycott of ARRL become successful...

I'm sure there are plenty of organizations besides ham radio that would be happy to step into the power vacuum. Look at Iraq. I'm sure ARRL is not nearly as bad as Sadaam to warrant a scorched earth solution.

# 1472. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 17:47:36 UTC
From: JB <nospam@goofball.net>
Message-ID: <Ye9Dk.93$kI6.9@nwrddc01.gnilink.net>
Source record: 4309

> >a lot of third world countries still use CW for distress calls,
>
> Some 3rd world countries also still use animals for plowing.

Some people in this country actually buy what these people produce.

And some people in this country put jewelry in their noses, lips, ears and other odd places.

Others go out and buy cell phone/TVs and pay $200+ a month for their communications.

Some people build model airplanes from WW2 or do needlepoint or collect antiques as a hobby.

We could write a book full of this stuff.

# 1473. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 18:02:31 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <er8qd41hu3jp1la5uintpaqlpnr3is1pb8@4ax.com>
Source record: 4310

"JB" <nospam@goofball.net> wrote:

>We could write a book full of this stuff.

I think we already have.

# 1474. Re: Needed: Cinch 10 pin female socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 19:53:52 UTC
From: Dave Foreman <davelf11@cox.net>
Message-ID: <lafqd4103793aqqfnoe84ljmfdgoikfp2k@4ax.com>
Source record: 4311

On Sat, 20 Sep 2008 19:49:49 -0700 (PDT), wa2rqy <rlucch2098@aol.com>
wrote:

>For my power supply which feeds my Gonset G-76.
>Appears that the last owner either removed the plastic pin retainer or
>it fell out.
>Now, there is nothing to support these female pins from wobbling
>around & connector from falling off with poor connections to boot.
>
>The Cinch/Jones model number is S-310-CCT-K
>Any help will be apprechiated in getting this rig back on the air.
>
>Need NOT be new.
>Regard/73.....
>Rich WA2RQY

Rich
Try this company.
I have purchased some Cinch/Jones items from them in the past.
Dave

Elliot Electronic Supply
Company Overview
Diodes, Sealed Lead Acid Batteries, Cases, Chemicals, Radio Frequency
(RF) Connectors, Fuses, Integrated Circuits (IC), Alternating Current
(AC) Power Supplies, Direct Current (DC) Power Supplies, Power
Supplies, Relays, Latching Relays, Discrete Semiconductors,
Transistors, Plug In Transformers available from Elliot Electronic
Supply based in Tucson, AZ. Click the links below to visit our website
or contact us via our profile page.

Contact Details
Elliot Electronic Supply
Address: 1251 S Tyndall Avenue, Tucson, Arizona (AZ), 85713, USA
Tel: work 520 884 7394
Fax: fax 520 884 7398

# 1475. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 20:51:17 UTC
From: N2EY@aol.com
Message-ID: <d998a170-7b00-45e5-a1d6-7d50bae1b351@b1g2000hsg.googlegroups.com>
Source record: 4312

On Sep 22, 2:36 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> "JB" <nos...@goofball.net> wrote:
> >having the patience to learn a skill will in fact tend to protect a valuable
> >resource from degradation by being flooded with impulsive personalities.
>
> The old having to learn the code will keep the whacko's out just
> doesn't stand up. The biggest offenders on the SSB 75M mess are code
> tested Extras...

But what mode are the using when they offend on 75 meters? It's not
Morse Code.

73 de Jim, N2EY

# 1476. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 21:06:39 UTC
From: N2EY@aol.com
Message-ID: <4e450828-7c55-49ba-9900-57d8df7df6e3@l64g2000hse.googlegroups.com>
Source record: 4313

On Sep 24, 9:00 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> N...@aol.com wrote:
> >A weeder test can be relevant.
>
> The trouble seems to be that we have different ideas of what a "weeder
> test" means. I could find no specific definition in any reference
> material, so I'll just no longer use the phrase.
>
> Simply put, there is no reason for a code test in the modern world.

Yes, there is. In ham radio, anyway.

The reason is this:

A license test for an amateur radio operator license should test
things hams actually do on the air.
Hams use Morse Code on the air in 2008.

> If
> someone wants to use CW he simply learns it or fires up his computer.

That same logic can be applied to anything in the written test too, so
why have a written test?

> There once were valid reasons to learn the code, but they haven't
> existed for decades.

Some reasons have gone away. Not all. And it hasn't been "decades",
either.

> That the code test survived so long was simply ham politics.

Not really. The treaty wasn't written by hams.

> >By testing, we make people prove they actually learned a few things...
>
> When an 8 year old child can pass the Extra exam, I think you can
> safely say that it can be passed without *knowing* the electronics
> theory that it pretends to test for.

How do you know for sure that the 8-year-old didn't know the material
on the test?

Bit of history:

Way back in 1948, the old Class B exam was passed on the first try by
Jane Bieberman, W3OVV (sk), at the Philadelphia FCC office. She was 9
years old at the time.

In those days, the Class B exams were:

13 wpm Morse Code receiving, minimum 1 minute solid legible copy out
of 5 minutes
13 wpm Morse Code sending with a straight key
50 question written exam that included:
- essay questions
- draw-a-diagram (schematic and block) questions
- show-your-work calculation questions
- multiple-choice questions

No published question-and-answer pools. No partial credit. No CSCEs.
No Bash books.

Now maybe W3OVV didn't understand every subtlety of every question,
but she did well enough to satisfy the FCC examiner.

> >But having observed what happens when people
> >are trusted to learn on their own, (cb as one example),
>
> Darn, if only they had started out with a CB code test
>  all would be well now...

Yes, it probably would be.

Do you think amateur radio should be more like CB? One license class,
no tests, everybody the same, people trusted to learn what they are
interested in and not have to learn stuff...

Yeah, that's been shown to work really well in radio.

73 de Jim, N2EY

# 1477. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 21:09:53 UTC
From: N2EY@aol.com
Message-ID: <2dfaeb4a-4c69-47a5-80fa-6b24302b12e1@73g2000hsx.googlegroups.com>
Source record: 4314

On Sep 26, 12:49 pm, AJ Lake <nom...@fakeaddress.com> wrote:
> "JB" <nos...@goofball.net> wrote:
> >Perhaps it is your hope that Amateur Radio not be represented or supported?
>
> ARRL is just one ham organization that tries to influence the FCC.

It's the biggest and oldest one in the USA.

> There are others.

Such as?

> I'm sure that they would be happy to step in should
> my personal boycott of ARRL become successful...

I don't think so. Without ARRL there'd soon be no amateur radio. Not
as we know it, anyway.

What would happen is that there would be a little change here and a
little change there until there was essentially nothing left.

73 de Jim, N2EY

# 1478. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 22:10:43 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <o0mqd411c2hdpsgvgpc59lmj9cr6urp7jo@4ax.com>
Source record: 4315

N2EY@aol.com wrote:

>But what mode are the using when they offend on 75 meters?
>It's not Morse Code.

The code test didn't keep the whackos out of the hobby. If that were
true there would be no code-tested offenders on *any* mode.

>maybe W3OVV [9 years old] didn't understand every subtlety
>of every question, but she did well enough to satisfy the FCC examiner.

You could pass the exam without knowing the material even back then.
The current Bash like study materials make it lots easier now though.

>Without ARRL there'd soon be no amateur radio.

Lots of other countries still have amateur radio. No ARRL there...

>Not as we know it, anyway.

That might be a good thing.

# 1479. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 22:25:08 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <MaidnS7riuqv_EDVnZ2dnUVZ_s_inZ2d@posted.cpinternet>
Source record: 4316

AJ Lake wrote:

> "JB" <nospam@goofball.net> wrote:
>
>
>>a lot of third world countries still use CW for distress calls,
>
>
> Some 3rd world countries also still use animals for plowing.

Perhaps that includes the USA? There is a robust draft-horse farming movement here in Minnesota.

Michael

## 1480. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-26 23:36:54 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6k5a0hF66k9uU1@mid.individual.net>
Source record: 4317

AJ Lake wrote:

> "JB" <nospam@goofball.net> wrote:
>
>>a lot of third world countries still use CW for distress calls,
>
> Some 3rd world countries also still use animals for plowing.

Some "third world" countries can't spell /ploughing/ :)

# 1481. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 01:22:12 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <jg2rd4lbbdah7e4ds363ie5jiajte8nkug@4ax.com>
Source record: 4318

Bob <biascomms@invalid.inv> wrote:

>Some "third world" countries can't spell /ploughing/ :)

When the Brits were kicked out 'pluffing' was outlawed... ;-)

## 1482. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 02:50:34 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <T6mdnWqsEc0aAkDVnZ2dnUVZ_t7inZ2d@comcast.com>
Source record: 4319

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:la4qd45k3vl0tjh7fgmd9g2k6n6b7rm6d0@4ax.com...
> "JB" <nospam@goofball.net> wrote:
>
>>Perhaps it is your hope that Amateur Radio not be represented or
>>supported?
>
> ARRL is just one ham organization that tries to influence the FCC.
> There are others. I'm sure that they would be happy to step in should
> my personal boycott of ARRL become successful...

Why haven't they already stepped and displaced the ARRL then. They should
already be working to take their place so that more people will boycott the
ARRL.

Perhaps because they simply can't handle more than a single issue at a time
(NCI comes to mind).

# 1483. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 02:56:43 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <f60045d7-f5a2-4dbe-a850-596e739387c8@25g2000hsx.googlegroups.com>
Source record: 4320

I think I get it. Would this explain why in a push-pull topology after the transistors have been replaced a couple of times the power supply just keeps failing for no apparent reason?

Are you saying that in other topologies it doesnt saturate or that it doesnt matter if it does?

Ordered Abe's book.

Jimmie

Well I remember repairing Sony TV push pull SMPS I made a living from replacing many a blown PP pair. Sony then went to PP pair in a single package. That reduced the business for me but I had much experience repairing them already. Trick with the Sony push pull was 2% timing components. The PP had to be within 2% of 50% duty cycle. They used a self starting multi vibrator design. After replacing the blown parts I'd power the input up at 20vac and use a 12vdc supply for the start up circuit, Then check the waveform on a scope to make sure it was with 2% fo 50% duty cycle. There was no dead time in the Sony's. They just varied the frequency to regulate the voltage.

73

n8zu

# 1484. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 03:59:07 UTC
From: AJ Lake <nomail@fakeaddress.com>
Message-ID: <elard45g31mnb40niuasmjah3gklce1369@4ax.com>
Source record: 4321

"Dee Flint" <deeflint01@comcast.net> wrote:

>Why haven't they already stepped and displaced the ARRL then.

I don't know of any ham organization that wants kill the ARRL. My supposition is that if there had been no ARRL, another group or groups would have been lobbying in it's place.

>They should already be working to take their place so that
> more people will boycott the ARRL.

Let me try one more time (3rd try). My boycott is purely a *personal* one to make *me* feel better. I really am not trying to get converts.

# 1485. Re: Needed: Cinch 10 pin female socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 09:50:43 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <e96ace37-94b4-487b-8d98-10b433add996@k13g2000hse.googlegroups.com>
Source record: 4322

I used to make a living selling Cinch connectors.
That part number is for a 10 pin female so any
Cinch number that begins with S-310 can be used
the suffix letters indicate the mount or shell style.
The numbers I remember off the top of my head:

S-310-AB
S-310-SB
S-310-CCE

The SB and AB are chassis mount the rivets can
be taken out and then the socket can be used in
a CCT or CCE style.

the S-310-CCT-K is a locking shell style. With
little clips on the sides to lock the socket in
place to it won't come out.

73 OM

n8zu

# 1486. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 10:03:37 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <e4e550c1-cf77-4287-9619-59301b793d8d@e53g2000hsa.googlegroups.com>
Source record: 4323
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

On Sep 24, 4:11 pm, Syl <s...@someplace.com> wrote:
> John Byrns a crit :
>
>
>
>
>
> > In article <gbdkji$v4...@aioe.org>, Syl <s...@someplace.com> wrote:
>
> >> John Byrns wrote:
> >>> In article <gbd7k6$7e...@aioe.org>, Syl <s...@someplace.com> wrote:
>
> >>>> Franc Zabkar a crit :
> >>>>> On Tue, 23 Sep 2008 18:24:47 -0400, "hifi-tek"
> >>>>> <t.hoeh...@insightbb.com> put finger to keyboard and composed:
>
> >>>>>>> I'd say that 8112 is a YYWW date code.
> >>>>>> It is a YYMM date code.
> >>>>> Then how do you account for the "32" in "235-8532K"?
> >>>> It IS YYWW (that is year and week)
> >>>> so....235-8532 means 1985, 32nd week. That is why the K is there...
> >>> I agree that it is YYWW, but I don't understand what you are saying the
> >>> reason
> >>> is that the "K" is there?  Why is the "K" there?
> >> weeK, to avoid any possible confusion to the date format used.
>
> > That's where I figured you were headed with the "K", but typically the YYWW date
> > code, as used on semiconductors for example, is used without a format indicator,
> > in fact IIRC some versions of the YYWW date code scramble the digits in one way
> > or another to obscure their meaning.
>
> > I wonder if the "K" might not have another meaning, such as a code to indicate
> > which of several factories the device was produced in?  If that is the case, the
> > fact that "K" is the last letter in "week" might just be a coincidence.
>
> Could well be but so far only found K and was told so.
>
> I was also told the first 3 digits where the factory ID,
> can anyone confirm this?
>
> Q: to OP. What country of origin is the cap from?
> Could it be a code for country of origin? Like Canada, US...
>

> Syl- Hide quoted text -
>
> - Show quoted text -

I used to make a living selling P.R. Mallory
the 3 digit code is the manufacturer, 274
is/was RCA. And 235 is/was Mallory.
Ole P.R Mallory used to snap up companies
like RMC and Duracell. When he retired they
started selling off all those companies.

73 OM

n8zu

## 1487. Lambda power supply schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 13:49:40 UTC
From: jimmie68@gmail.com
Message-ID: <f2908146-ebf8-4ec4-9bdc-7214599d2c8f@m36g2000hse.googlegroups.com>
Source record: 4324

I am looking for schematic/ manual for a Lambda LYS-P-15 power
suppply. I bought a couple of these at a hamfest a few years ago and
as I remember they worked before they got put away in storage but dont
now.
Any help would be greatly appreciated.

Jimmie

# 1488. Money makes everyone healthy

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 16:57:45 UTC
From: anuu <anujbatta2012@gmail.com>
Message-ID: <ed3fcff8-5464-4272-856a-837f5fda2bfc@b38g2000prf.googlegroups.com>
Source record: 4325

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# 1489. Re: Mallory date code ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 17:26:51 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <vcydnYdszppG8UPVnZ2dnUVZ_sWdnZ2d@earthlink.com>
Source record: 4326
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.repair

raypsi wrote:
>
> I used to make a living selling P.R. Mallory
> the 3 digit code is the manufacturer, 274
> is/was RCA. And 235 is/was Mallory.
> Ole P.R Mallory used to snap up companies
> like RMC and Duracell. When he retired they
> started selling off all those companies.

Now, Mallory (Capacitors) is owned by Cornell Dubiler.

--
http://improve-usenet.org/index.html

aioe.org, Goggle Groups, and Web TV users must request to be white
listed, or I will not see your messages.

If you have broadband, your ISP may have a NNTP news server included in
your account: http://www.usenettools.net/ISP.htm

There are two kinds of people on this earth:
The crazy, and the insane.
The first sign of insanity is denying that you're crazy.

# 1490. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 23:25:03 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <lfzDk.34823$IB6.15288@bignews8.bellsouth.net>
Source record: 4327

Tio Pedro wrote:
> "Bob" <biascomms@invalid.inv> wrote in message
> news:6jpcm0F4dqt4U1@mid.individual.net...
>> Tio Pedro wrote:
>>
>>> A lot of folks have reported good results using the 6JH8 in place
>>> of the 7360; with a few reporting better linearity. They appear
>>> to be pretty much the same as far as performance. Have you tried
>>> one?
>> Yes I have. The results were disappointing compared to the 7360. Perhaps
>> my values weren't optimised. Maybe I should try again - the 6JH8 is
>> /much/
>> cheaper!
>>
>> Bob
>>
> Yeah, and I had a shot at a sleeve of them for 60 bucks several months
> back :( Unfortunately, they aren't going to get any less expensive as
> time passes.
>
> Pete
>
>
There were a few other BD tubes as well.
The 6AR8 and 6ME8 are also listed in the RCA receiving tube
manuals along with the 6JH8. I don't know about current price
and supply on those.

# 1491. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 23:28:30 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <AizDk.34825$IB6.12928@bignews8.bellsouth.net>
Source record: 4328

Tio Pedro wrote:
> "Bob" <biascomms@invalid.inv> wrote in message
> news:6jpcm0F4dqt4U1@mid.individual.net...
>> Tio Pedro wrote:
>>
>>> A lot of folks have reported good results using the 6JH8 in place
>>> of the 7360; with a few reporting better linearity. They appear
>>> to be pretty much the same as far as performance. Have you tried
>>> one?
>> Yes I have. The results were disappointing compared to the 7360. Perhaps
>> my values weren't optimised. Maybe I should try again - the 6JH8 is
>> /much/
>> cheaper!
>>
>> Bob
>>
> Yeah, and I had a shot at a sleeve of them for 60 bucks several months
> back :( Unfortunately, they aren't going to get any less expensive as
> time passes.
>
> Pete
>
>
Also check out this link, good info on the 7360 as a mixer.
http://www.mail-archive.com/amradio@mailman.qth.net/msg03105.html
Seems the 7360 performance is poor with IF's above 1mhz.

## 1492. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 23:35:54 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <BrzDk.13167$VS3.9585@newsfe12.iad>
Source record: 4329

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in > Also check out this link, good info on the 7360 as a mixer.
> http://www.mail-archive.com/amradio@mailman.qth.net/msg03105.html
> Seems the 7360 performance is poor with IF's above 1mhz.

That poster also claims there is no rejection of either input signal (grid or deflection plates) offered by the 7360.
Being a balanced modulator, the grid
signal can be cancelled by balancing the plate circuit.
It is used for DSB generation in SSB rigs!

Pete

# 1493. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-27 23:54:26 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6k7vddF6ca8mU3@mid.individual.net>
Source record: 4330

ken scharf wrote:

> Also check out this link, good info on the 7360 as a mixer.
> http://www.mail-archive.com/amradio@mailman.qth.net/msg03105.html
> Seems the 7360 performance is poor with IF's above 1mhz.

The writer's an idiot. The 7360 is good to over 50 MHz IF!

Bob

# 1494. day 114 of the lawsuit wach the suit is stil MIA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 00:32:59 UTC
From: an_old_friend <konstans@hotmail.com>
Message-ID: <a17166a3-850e-4c1a-9de3-680e52073d17@l42g2000hsc.googlegroups.com>
Source record: 4331
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

On Sep 26, 9:20 am, tyreem...@gmail.com wrote:
>
spam

# 1495. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 00:46:20 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <RoADk.41384$Ep1.38006@bignews2.bellsouth.net>
Source record: 4332

Bob wrote:
> ken scharf wrote:
>
>> Also check out this link, good info on the 7360 as a mixer.
>> http://www.mail-archive.com/amradio@mailman.qth.net/msg03105.html
>> Seems the 7360 performance is poor with IF's above 1mhz.
>
> The writer's an idiot. The 7360 is good to over 50 MHz IF!
>
> Bob
What he claimed was that the conversion gain dropped to unity above
that frequency. That doesn't mean it isn't a good mixer at 50mhz.
Diode ring mixers have a unity (or LESS!) conversion gain, yet they
are very good mixers.

# 1496. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 00:54:26 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <cBADk.325$Ra2.130@newsfe06.iad>
Source record: 4333

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:RoADk.41384$Ep1.38006@bignews2.bellsouth.net...
> >> The writer's an idiot. The 7360 is good to over 50 MHz IF!
>>
>> Bob
> What he claimed was that the conversion gain dropped to unity above
> that frequency. That doesn't mean it isn't a good mixer at 50mhz.
> Diode ring mixers have a unity (or LESS!) conversion gain, yet they
> are very good mixers.

I have to wonder if the guy took a broadband, untuned
PD circuit and tried to use it as a broadband mixer?

If that's the case, then the interelectrode c
apacities would definitely limit BW in a high
impedance circuit, unless they were
"tuned" out using a LC resonant circuit. I ran into that
headscratcher trying to figure out how to drive the
deflectors using a broadband balun type arrangement;
like was done in the Squires RX.

Pete

# 1497. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 05:50:49 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6k8k9kF6i2boU1@mid.individual.net>
Source record: 4334

ken scharf wrote:

> What he claimed was that the conversion gain dropped to unity above
> that frequency. That doesn't mean it isn't a good mixer at 50mhz.
> Diode ring mixers have a unity (or LESS!) conversion gain, yet they
> are very good mixers.

I get useful conversion gain at higher frequencies (though it's reduced) and it's easily compensated for by the AGC. I found that I needed fairly consistent IF signal levels for best performance of my crystal filters.

I appreciate the conversion /loss/ of diode ring mixers, but I find that amplifying, then attenuating, then amplifying again tends to introduce additional unwanted noise that can be avoided by use of a sensible gain distribution. Diode mixers also don't handle very large signal levels very well, and can produce some very strange results when over driven! I can't really understand the love that some designers have for them.

My newer design approach is to use a switching ring of FETs, but the results still can't match up to the 7360.

Bob

# 1498. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 05:54:07 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6k8kfqF6i2boU2@mid.individual.net>
Source record: 4335

Tio Pedro wrote:

> I have to wonder if the guy took a broadband, untuned
> PD circuit and tried to use it as a broadband mixer?

Almost certainly. He was therefore destined to fail completely!

> If that's the case, then the interelectrode
> capacities would definitely limit BW in a high
> impedance circuit, unless they were
> "tuned" out using a LC resonant circuit.

Exactly. "Tuning them out" would make the mixer somewhat less "broadband"!

> I ran into that
> headscratcher trying to figure out how to drive the
> deflectors using a broadband balun type arrangement;
> like was done in the Squires RX.

I looked at the Squires design, and it was very clever, but seemed to require some obscure components that were unobtainable.

Bob

# 1499. Re: Needed: Cinch 10 pin female socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 09:44:50 UTC
From: revtex <revtex@onetel.com>
Message-ID: <2b941461-762f-457e-83f6-8c188902b470@z66g2000hsc.googlegroups.com>
Source record: 4336

On Sep 21, 3:49 am, wa2rqy <rlucch2...@aol.com> wrote:
> For my power supply which feeds my Gonset G-76.
> Appears that the last owner either removed the plastic pin retainer or
> it fell out.
> Now, there is nothing to support these female pins from wobbling
> around & connector from falling off with poor connections to boot.
>
> The Cinch/Jones model number is S-310-CCT-K
> Any help will be apprechiated in getting this rig back on the air.
>
> Need NOT be new.
> Regard/73.....
> Rich WA2RQY

Try www.electronicplus.com

they show s-310-cct but not -k

regards Revtex (non Ham)

## 1500. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 12:37:02 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B274D7F023A42MDWN@194.177.96.78>
Source record: 4337

Topologies like push-pull, half-bridge and full bridge don't require dead time to reset the transformer core. Though that doesn't mean the switch's conduction times can overlap which causes shoot-though current.

I think what kills the push-pull in this case is overlapping conduction times not core saturation.

For amplifier power supplies it would simplify things to do the regulation at a lower voltage and keep the HV parts at a minimum. Phase controlled 60Hz switching is ok but this might be a better way.

There's a use for push-pull or half-bridge or full-bridge where the switches duty cycles are not modulated and the frequency is fixed. The switches run as close to 50% duty cycle as possible without overlap. It's called a "DC Transformer." It's one of the building blocks of compound converter topologies. Handy because it offers isolation and a fixed ratio of step-up or step-down with a DC input and output.

Since there's minimal dead-time and no output inductor is required. The efficiency can be very high. The control circuit is an oscillator running at 2F (Like a 555,) followed by a flip-flop and a couple of gates to insure there is never overlap. When using MOSFETs an RCD network on their gates will work, though I favor using logic gates.

So if you built one of these with a 10:1 ratio you could put 200VDC in and get 2000VDC out. Any regulation or protection would be done to the 200VDC input. This might not be a bad idea... your 2KV output stage now consists of only rectifiers and a capacitor.

Doesn't have to be 200V, pick the voltage that makes it easy.

Just a thought.

raypsi <RBorowiak@gmail.com> wrote in news:f60045d7-f5a2-4dbe-a850-596e739387c8@25g2000hsx.googlegroups.com:

> Well I remember repairing Sony TV push pull SMPS I made a living from
> replacing many a blown PP pair. Sony then went to PP pair in a single
> package. That reduced the business for me but I had much experience
> repairing them already. Trick with the Sony push pull was 2% timing
> components. The PP had to be within 2% of 50% duty cycle. They used a

> self starting multi vibrator design. After replacing the blown parts
> I'd power the input up at 20vac and use a 12vdc supply for the start
> up circuit, Then check the waveform on a scope to make sure it was
> with 2% fo 50% duty cycle. There was no dead time in the Sony's. They
> just varied the frequency to regulate the voltage.
>
> 73
>
> n8zu
>

# 1501. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 16:22:11 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <V4ODk.50194$XB4.2270@bignews9.bellsouth.net>
Source record: 4338

Bob wrote:

> My newer design approach is to use a switching ring of FETs, but the results
> still can't match up to the 7360.
Do you use the fets as passive switches, or do you apply power between the source/drain? What kind of fets (IE: depletion mode jfets or enhancement mode mosfets)?

Can you post the 7360 mixer circuit you use somewhere?

BTW these tubes (7360, 6AR8, 6JH8, 6ME8) are sensitive to magnetic fields and need to be shielded for best results. James Millen used to make a mu-metal shield that would fit over tubes this size. I would suspect unshielded tubes could be the reason for the poor results obtained with some of the color tv versions of these tubes.

Also the 7360 is shown as a tetrode, while the color tv tubes are pentodes (ie: they have three grids), but grid #2 is grounded and grid #3 has normal 'screen' voltage applied. Grid #2 is internally connected to the heater or cathode for these tubes.

# 1502. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 16:47:12 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <tyODk.930$FV4.171@newsfe07.iad>
Source record: 4339

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:RoADk.41384
>> ken scharf wrote:

> What he claimed was that the conversion gain dropped to unity above
> that frequency. That doesn't mean it isn't a good mixer at 50mhz.
> Diode ring mixers have a unity (or LESS!) conversion gain, yet they
> are very good mixers.

The conversion gain should be much greater than unity
for any of those balanced mixers. He was doing
something wrong to write statements like those.

Regarding the DBMs, sure they have some loss,
but the losses basically sets the mixer noise figure.
Add a few dB loss for the the front-end preselector
filtering, and may 8 dB loss for the mixer, followed
by a strong, low noise IF amplifier, and your pretty
much good to go, on the HF bands anyway..

DBMs like to be driven by symmetrical
LO waveforms (square wave is great) and the port
terminations are critical as well. My own experience
with them is that the supporting stages also need good
shielding, filtering and bypassing, they are great
harmonic mixers from DC to light!

I'm sure Bob's H-Ring designs are suberb; I've
pretty stopped playing with mixer circuits after the
DBMs became available well over 20 years ago!

Pete

# 1503. Johshe 31 year old Woman in Santa Ana, California. Find Men for 1-on-1 sex, Bondage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 17:51:55 UTC
From: tyreemand@gmail.com
Message-ID: <2f0f59a0-8c9a-4666-8c93-b27e597c9dd6@b1g2000hsg.googlegroups.com>
Source record: 4340
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Johshe 31 year old Woman in Santa Ana, California. Find Men for 1-on-1
sex, Bondage, Discipline, Discreet Relationship or Group sex
http://ragdai.info/Johshe3.htm

# 1504. Re: Needed: Cinch 10 pin female socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 21:06:42 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <5118e247-f7bd-4c9e-a4f5-bb0d5e2d6b8f@8g2000hse.googlegroups.com>
Source record: 4341

On Sep 20, 10:49 pm, wa2rqy <rlucch2...@aol.com> wrote:
> For my power supply which feeds my Gonset G-76.
> Appears that the last owner either removed the plastic pin retainer or
> it fell out.
> Now, there is nothing to support these female pins from wobbling
> around & connector from falling off with poor connections to boot.

Well if you has the shell, any S-310 will work. It's all the same
just
the shell or the mounting is different

I'd go wit the S-310-CCT

73 OM

n8zu

# 1505. Re: Self-excited Beam Deflection mixers?? Opinions???

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-28 22:57:16 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6kage8F537q6U1@mid.individual.net>
Source record: 4342

ken scharf wrote:

> Can you post the 7360 mixer circuit you use somewhere?

I'll send you an email tomorrow. I'll have to scan my sketches - as with
all the best projects, the documentation was "informal"! ;)

Bob

# 1506. Super virtual girl. Sexy. Must look ALL!

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-29 15:48:23 UTC
From: tyreemand@gmail.com
Message-ID: <30dbc41a-1827-4357-8e72-e95b8e80e2e8@l64g2000hse.googlegroups.com>
Source record: 4343
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Super real virtual girl. Sexy. Must look ALL http://ragdai.info/video.htm

# 1507. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-30 18:13:27 UTC
From: jimmie68@gmail.com
Message-ID: <63adc3a7-5996-4135-9077-f846fedf17d7@j68g2000hsf.googlegroups.com>
Source record: 4344

On Sep 10, 8:05 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> > Exactly right it is a gapped core. Once I git's a scope on I'll see.
>
> > But the voltage doubler they using is full wave doubler. Which means
> > they taking the positive and negative waves  to get 4000 or so volts
> > DC
> > Now the positive half they use a .0082 mfd for a filter and the
> > negative half they use a .0056 mfd filter both at 3000wvdc.
>
> my guess is the quasi-push pull output is due to the leakage energy
> recovery circuit.  HV flyback transformers usually have very high
> leakage inductance (the part of the magnetizng inductance not coupled
> to the secondary is leakage inductance) because distance between
> windings is a major cause of poor coupling and you need distance for
> isolation.
>
> The leakage energy sloshes about in the primary causing all sorts of
> mischief.  This circuit recovers it and dumps it back into the primary.
> It's unusual since the leakage energy is usually dumped back into the
> bulk storage capacitor on the primary side if it's recovered by a clamp
> winding or active clamp circuit.
>
> A soft switching topology often uses the leakage inductance to reduce
> transistion losses in  the switch.  Sometimes a discrete inductor is
> added in series with the transformer primary to add to it.  Another
> bonus for the lousy coupling of the HV flyback transformer... no
> discrete inductor needed.  I think of this as electronic ju-jitsu.
>
> The energy per half cycle (on the secondary) won't be equal so juggling
> the capacitor values helps equalize the voltage stress.
>
> Eh!  I might be completely wrong.  Simulating it would be the thing
> but it's too much like work work and I'd need the transformer parameters.
>
> At least that's how I think it works... Please let me know when you've
> scoped the waveforms.

I was looking at some old UPSs without the big iron transformer and
was trying to figure how they get 60Hz 1KW out of that little
transformer.
The best I an figure is that it works somewhat like a class G
amplifier. In this case the pulse width of the 20Khz or so signal is
being PW
modulated so when the output is intergrated you get 60Hz. If this is

the case I am thinking that UPSs may be hacked into HV power supplies
a lot easier,
safer and better than microwave oven power supplies.

Jimmie

# 1508. Re: microwave oven inverter P.S. revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-30 23:13:16 UTC
From: jimmie68@gmail.com
Message-ID: <da31d4bd-6cd3-4186-9c03-33b87f606ee7@t42g2000hsg.googlegroups.com>
Source record: 4345

On Sep 30, 2:13 pm, jimmi...@gmail.com wrote:
> On Sep 10, 8:05 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
>
>
>
>
>
> > > Exactly right it is a gapped core. Once I git's a scope on I'll see.
>
> > > But the voltage doubler they using is full wave doubler. Which means
> > > they taking the positive and negative waves  to get 4000 or so volts
> > > DC
> > > Now the positive half they use a .0082 mfd for a filter and the
> > > negative half they use a .0056 mfd filter both at 3000wvdc.
>
> > my guess is the quasi-push pull output is due to the leakage energy
> > recovery circuit.  HV flyback transformers usually have very high
> > leakage inductance (the part of the magnetizng inductance not coupled
> > to the secondary is leakage inductance) because distance between
> > windings is a major cause of poor coupling and you need distance for
> > isolation.
>
> > The leakage energy sloshes about in the primary causing all sorts of
> > mischief.  This circuit recovers it and dumps it back into the primary.
> > It's unusual since the leakage energy is usually dumped back into the
> > bulk storage capacitor on the primary side if it's recovered by a clamp
> > winding or active clamp circuit.
>
> > A soft switching topology often uses the leakage inductance to reduce
> > transistion losses in  the switch.  Sometimes a discrete inductor is
> > added in series with the transformer primary to add to it.  Another
> > bonus for the lousy coupling of the HV flyback transformer... no
> > discrete inductor needed.  I think of this as electronic ju-jitsu.
>
> > The energy per half cycle (on the secondary) won't be equal so juggling
> > the capacitor values helps equalize the voltage stress.
>
> > Eh!  I might be completely wrong.  Simulating it would be the thing
> > but it's too much like work work and I'd need the transformer parameters.
>
> > At least that's how I think it works... Please let me know when you've
> > scoped the waveforms.
>
> I was looking at some old UPSs without the big iron transformer and

> was trying to figure how they get 60Hz 1KW out of that little
> transformer.
> The best I an figure is that it works somewhat like a class G
> amplifier. In this case the pulse width of the 20Khz or so signal is
> being PW
> modulated so when the output is intergrated you get 60Hz. If this is
> the case I am thinking that UPSs may be hacked into HV power supplies
> a lot easier,
> safer and better than microwave oven power supplies.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

Oooops, I meant class D instead of class G

## 1509. Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-09-30 23:37:27 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <ZKyEk.151029$6p1.91971@en-nntp-07.dc1.easynews.com>
Source record: 4346

I'm thinking it'd be a rather poor idea to make a reference oscillator for a DDS (or PLL) equal in frequency to an IF somewhere in your radio... right? Since you're just asking for it to get into the IF itself?

In the ideal world, would one choose reference oscillator frequencies that weren't harmonically related to IFs? I've seen those "IF planning" spreadsheets (that calculator where mixer spurs are going to fall), and such a choice seems like a good start.

Thanks,
---Joel Koltner

# 1510. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 00:13:37 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <4YGdnZdX2IgwXX_VnZ2dnUVZ_gGdnZ2d@web-ster.com>
Source record: 4347

Joel Koltner wrote:
> I'm thinking it'd be a rather poor idea to make a reference oscillator for a
> DDS (or PLL) equal in frequency to an IF somewhere in your radio... right?
> Since you're just asking for it to get into the IF itself?
>
> In the ideal world, would one choose reference oscillator frequencies that
> weren't harmonically related to IFs? I've seen those "IF planning"
> spreadsheets (that calculator where mixer spurs are going to fall), and such a
> choice seems like a good start.

I would certainly avoid it. With thorough enough shielding you can keep
just about any signal out of any circuit, but there's no need to tempt fate.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 1511. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 04:59:44 UTC
From: Erich <n6fd@mchsi.com>
Message-ID: <4tDEk.311802$TT4.161925@attbi_s22>
Source record: 4348

Tim Wescott wrote:
> Joel Koltner wrote:
>> I'm thinking it'd be a rather poor idea to make a reference oscillator
>> for a DDS (or PLL) equal in frequency to an IF somewhere in your
>> radio... right? Since you're just asking for it to get into the IF
>> itself?
>>
>> In the ideal world, would one choose reference oscillator frequencies
>> that weren't harmonically related to IFs? I've seen those "IF
>> planning" spreadsheets (that calculator where mixer spurs are going to
>> fall), and such a choice seems like a good start.
>
> I would certainly avoid it. With thorough enough shielding you can keep
> just about any signal out of any circuit, but there's no need to tempt
> fate.
>
If you have a decent receiver, you would need over 100db of isolation.
That is very hard to get in a small space. One of the arts of receiver
design is taking care that all of the frequencies and mixing products
don't show up in the passband.

Erich N6FD

# 1512. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 12:15:41 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <orednYQaXIZu9H7VnZ2dnUVZ_j6dnZ2d@comcast.com>
Source record: 4349

"Michael Black" <et472@ncf.ca> wrote in message
news:Pine.LNX.4.64.0809091344450.12702@darkstar.example.org...
> On Mon, 8 Sep 2008, AJ Lake wrote:
>
[snip]
> You have no history here, yet you pounce the minute someone posts
> about CW, someone who has been here a long time. And then a bunch
> of others suddenly appear, even though they don't post about building
> amateur radio equipment here.
>
> There is rec.radio.amateur.policy and rec.radio.amateur.misc and
> even rec.radio.amateur.moderated where you can have your debates
> to your heart's content.

rec.radio.amateur.policy has become unusable for any type of discussion due to the single handed take over by one individual. He has so many user names that blocking him becomes a chore in itself. The hundreds of posts that he makes in a day on every thing else that is posted was the reason that rec.radio.amateur.moderated was formed.

# 1513. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 12:20:51 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <JL-dndGcn6O19n7VnZ2dnUVZ_rPinZ2d@comcast.com>
Source record: 4350

"Scott" <acepilotREMOVE@bloomer.net> wrote in message
news:GvmdnTUQnMjWOlrVnZ2dnUVZ_tHinZ2d@bright.net...
> Bryan wrote:
>> Tim Shoppa wrote:
>> [snip]
>> The controversy in the 70's was the Technician license, a ticket that
>> required no code, as a way to get some CB'ers to take notice. I myself
>> came to ham radio in the 70's but had no interest in anything having
>> to do with Technician privileges. I know many other hams who did come
>> in that way in the 70's, 80's, etc.
>>
>> Tim N3QE
>>
>> The original Technician license required passing of a 5wpm receiving &
>> sending Morse test.
>>
>> 73,
>> Bryan WA7PRC
>
> I concur from experience in 1982 when I got my Tech license. I had to
> take the 5WPM code test at the FCC office. We had the same HF privileges
> as Novices and could operate on any frequency above 50.000 MHz. I can't
> recall, but I "THINK" the first code-free Tech licenses did not have HF
> privileges. Now that there is no code requirement for any class, I think
> Techs have some HF privileges again...a bit confusing ;)
>
> Scott
> N0EDV

The original no code Tech had no HF privileges since international treaties
required code for frequencies below 30 MHz.

Today's Technician now has all the HF privileges of the Novice class. Those
privileges have now been expanded also. On 40m, 15m, and 10m, their CW
privileges now cover the same spectrum as the General class license.

Dee
N8UZE

# 1514. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 13:19:15 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <ToidnR6VgI5K5X7VnZ2dnUVZ_rPinZ2d@comcast.com>
Source record: 4251

"AJ Lake" <nomail@fakeaddress.com> wrote in message
news:vonod49c0ct1brj6q1rkrqujqn257ul180@4ax.com...
> "Dee Flint" <deeflint01@comcast.net> wrote:
>
>>They [B&N] are not a library but a business.
>
> B&N is a very successful business. When they think the 'library'
> chairs are losing them money, the chairs will be removed.
>
>>The chairs and atmosphere are so you can SAMPLE the reading
>>material not spend the day reading.
>
> I *sampled* QST and *bought* another magazine or book. The bottom line
> $$ for B&N was the same or more. Your tears are for the wrong entity.
> B&N made money because I was drawn to their 'free sample' QST
> magazine. QST is the one who lost money, but then that's what voting
> with your wallet is all about...

Reading QST at B&N is not "sampling". It is hypocritical. Since you are boycotting the ARRL by not being a member, your "sampling" of the magazine in the book store is absolute hypocrisy. You want the benefits of the organization without paying for them. If you are going to boycott the ARRL, do it right. Don't read their magazine.

## 1515. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 16:32:30 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <ACNEk.154940$C65.109425@en-nntp-01.dc1.easynews.com>
Source record: 4252

Thanks guys, I'll keep my reference at something like 40MHz and my last IF at something like 21.4MHz...

# 1516. Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 16:55:09 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <56b87321-1b0c-462b-a26c-4926578ba1c8@e17g2000hsg.googlegroups.com>
Source record: 4253

Understand that inside a typical computer switching power supply there is a higher multi kilohertz voltage (350v RMS????) produced by the switching action of the rectified 115 or 230 volt AC input?

This high freq AC through various usually toroidal step down transforner windings is then rectified to provided the plus and minus 5, 12 volt outputs etc. Correct?

We recently modified such a power supply to get a single 12 volt DC output at about 20 amps for a particular, amateur radio application. In order to do so we had to load one of the 5 volt ouputs with a couple of amps in order to get the unit to work; but that's normal.

Question: Is it possible to get at that higher AC voltage inside and directly rectify it as a B+ supply for tube equipment? While also possibly tiddling one or more of the 5 volt DC outputs closer to 6.3 volts for tube heaters?

Rectified 10 or 20 kilohertz wouldn't need much filtering compared to 60 or 120 DC ripple of a conventiaonl power supply? Recall building a number of conventional 50 and 60 hertz power supplies many years ago with heavy chokes and large capacitors. But now have a number of slightly older ex computer power supplies of various wattages around.

Or is the idea completly off base?

# 1517. FA: Impoverished Radio Experimenter book set

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 17:21:27 UTC
From: beerbarrel <beerbarrel@cox.net>
Message-ID: <0f6e4b61-202b-4c84-9bc4-df67b34bc7cc@d45g2000hsc.googlegroups.com>
Source record: 4254

170268256402

# 1518. Re: CW is a hobby (off topic BWTH)

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 17:29:20 UTC
From: JB <nospam@goofball.net>
Message-ID: <QrOEk.42$P5.28@nwrddc02.gnilink.net>
Source record: 4255

> > magazine. QST is the one who lost money, but then that's what voting
> > with your wallet is all about...
>
> Reading QST at B&N is not "sampling". It is hypocritical. Since you are
> boycotting the ARRL by not being a member, your "sampling" of the magazine
> in the book store is absolute hypocrisy. You want the benefits of the
> organization without paying for them. If you are going to boycott the
ARRL,
> do it right. Don't read their magazine.
>
-- And stop using the frequencies they fought to protect without your help.

It is a Psychological defense mechanism to go to great extremes to construct a justification for doing something we deep down feel is wrong. We lie to convince ourselves they have done some great wrong, and we lie to ourselves that we never do wrong to anyone else.

Somehow this has become the norm, but that doesn't mean it isn't anti-social or even destructive behavior.

"Do unto others as you would have them do to you" (and don't fool yourself into believing you really are).

Of course I would prefer no one used ME as a training example, so perhaps I am guilty too. Perhaps if I don't give the person's name I can forgive myself?

# 1519. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-01 18:14:46 UTC
From: JB <nospam@goofball.net>
Message-ID: <q6PEk.53$P5.29@nwrddc02.gnilink.net>
Source record: 4256

--Doh!

You could always redesign the IF.

"Joel Koltner" <zapwireDASHgroups@yahoo.com> wrote in message
news:ZKyEk.151029$6p1.91971@en-nntp-07.dc1.easynews.com...
> I'm thinking it'd be a rather poor idea to make a reference oscillator for
a
> DDS (or PLL) equal in frequency to an IF somewhere in your radio... right?
> Since you're just asking for it to get into the IF itself?
>
> In the ideal world, would one choose reference oscillator frequencies that
> weren't harmonically related to IFs? I've seen those "IF planning"
> spreadsheets (that calculator where mixer spurs are going to fall), and
such a
> choice seems like a good start.
>
> Thanks,
> ---Joel Koltner
>
>

# 1520. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 00:23:10 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B2AC537B186D2MDWN@194.177.96.78>
Source record: 4257

You're pretty much on base with some some slight adjustments.

The switching frequency is about ten times higher about
100KHz or so. The high voltage might be full wave
rectified, doubled or boosted by a power factor corrector
... but 300V is close.

The step down transformer is usually an E-E core or ETD
core. The toroids are output inductors. An additional
inductor is used for 3.3V in some supplies as a magnetic
amplifier, which lops off some pulse width from the +5V
output.

It's possible to modify a PC supply and add a B+ output
but you'd have to re-wind the transformer and output
inductor(s).

Usually the outputs are cross-regulated. That is the +5V
is the regulated channel and the other outputs track due to
the transformer turns ratios (sometimes with help from
weighted-sum voltage sensing.) That's why the 5V output has
to be loaded to get any output from the +12V.

If the 6.3VDC output was most of the power it would make sense
to use the 5V channel for this, strip off the other outputs and
wind a new secondary for your B+ in their place.

You're right, the transformer and filter components would be
much, much smaller. Though you'll need room for additional
EMI filtering... even so it's still much smaller. Some newer
PC supplies spread the clock frequency (frequency modulate it
with pseudo random noise) which can help.

> Understand that inside a typical computer switching power supply there
> is a higher multi kilohertz voltage (350v RMS????) produced by the
> switching action of the rectified 115 or 230 volt AC input?
>
> This high freq AC through various usually toroidal step down
> transforner windings is then rectified to provided the plus and minus
> 5, 12 volt outputs etc. Correct?
>
> We recently modified such a power supply to get a single 12 volt DC
> output at about 20 amps for a particular, amateur radio application.
> In order to do so we had to load one of the 5 volt ouputs with a
> couple of amps in order to get the unit to work; but that's normal.
>

> Question: Is it possible to get at that higher AC voltage inside and
> directly rectify it as a B+ supply for tube equipment? While also
> possibly tiddling one or more of the 5 volt DC outputs closer to 6.3
> volts for tube heaters?
>
> Rectified 10 or 20 kilohertz wouldn't need much filtering compared to
> 60 or 120 DC ripple of a conventiaonl power supply? Recall building a
> number of conventional 50 and 60 hertz power supplies many years ago
> with heavy chokes and large capacitors. But now have a number of
> slightly older ex computer power supplies of various wattages around.
>
> Or is the idea completly off base?
>

# 1521. Analysis and Keyword research

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 02:23:46 UTC
From: legalmind <tedlacosta@msn.com>
Message-ID: <38403d9f-8d17-4057-ac18-a801ec3801e3@p59g2000hsd.googlegroups.com>
Source record: 4258

Savvy Competitor Analysis and Keyword Research Your Competitors Arent Doing

By Dave Davies - Wed, 10/01/2008 - 5:12pm.
First, let’s tackle competitive analysis. As an entrepreneur, you're no doubt familiar with some of the conventional wisdom about how to handle competitors. Do your research. Check public records and disclosures about big name firms in your industry. Assess your goals, branding plans, and future efforts in the context of the presumptive goals of your industry rivals. Understand why customers choose competitors over your firm -- both why they like your rivals and why they refuse to work with you.

Beyond this broad and relatively intuitive theorizing about competitor analysis, however, you may not be that up-to-speed on the latest tactics.

First of all, purchase stock in rival companies. This may seem counterintuitive – why support a rival firm at all? - but great benefits await. Stockholders get regular reports on firms’ finances and long-term strategies. You can glean a lot about your rivals’ positioning -- and see what other stockholders are saying -- all without wasting dozens of hours on frustrating Internet research.

Second, learn from your competitors’ competitors. You may have heard the expression “my enemy’s enemy is my friend.” This tactic makes use of a similar concept. You don’t have to do all the “oppo” research yourself -- you can trade ideas, data, and strategies with mutual competitors. Learn your rivals’ weaknesses as well their strengths. The devil you know is almost always easier to handle than the devil you don’t.

Stay up-to-date on what’s happening in your industry. Go to conferences. Don’t delegate the responsibility of watching your rivals to a third party. Attend trade shows. Use Google, the Internet, and public archives to investigate competitors. Don’t let your guard down -- even if you are an established “big dog” in your field. Be knowledgeable and networked, and you will be less likely to be surprised.

Finally, remember that the competitive landscape is always fluid. Your biggest competitor next quarter may be an unknown today. Given the advent of global business markets and the mixing of industries that globalization has created, there is almost no way to anticipate what “the next big thing” will be in your industry. But simply by maintaining a flexible posture, you will be more agile when responding

to new challenges.

In terms of keyword research strategies that defy the conventional wisdom, your best bet in general is to try out a variety of tactics in a microcosm and then apply the ones that work in larger “marketing laboratories.”

Employ abbreviations, acronyms, and shortcuts -- real shortcuts that people searching on Google would actually use. Keep things simple: “personal computer” might be abbreviated as “PC”; the month of “January” may be abbreviated as “Jan”; and so on.

Zero in on better keywords. For instance, if you are marketing a Phoenix real estate site, you might want to have a keyword for “Phoenix AZ real estate,” since many people who search Google will abbreviate Arizona as “AZ.”

Anticipate typos, malapropisms, and misspellings when coming up with your keywords. People may type too many or too few letters in a word, omit key vowels, or switch letter orders around by accident. There is a great site -- searchspell.com -- that can help you guess the most popular misspellings and typos for particular words and phrases.

Throw geographical references into your keywords. The more specific your geo targeting, the easier time you will have not only at attracting local business but also at ranking high in the general “lottery” for Google rankings. For instance, if you are advertising a Connecticut law firm, don’t just create keywords based on permutations of “Connecticut,” “CT,” “law,” “lawyer,” etc. Throw in names of nearby towns that your office would service, such as “Simsbury,” “Avon,” “Farmington,” “Bloomfield,” and “Hartford.” You will have an easier time ranking, and your resultant visitors will feel you are speaking and relating more specifically to them.

To increase the effectiveness and conversion of your keywords, think about the action your demographic needs to take and titrate your keywords down to specific action-oriented phrases. “Los Angeles mortgages” has some measure of geographic filtering; “Los Angeles mortgage brokers” is better and more specific. But “Los Angeles home mortgage application” is better by leaps and bounds because the phrase carries a significant amount of implied intent. Of course fewer people will search using that term, but the ones that do are further along in the cycle, closer to closing a deal, and ready to take action.

We at Beanstalk use AdGooroo's keyword tool and competitor analysis services to get an even more in-depth look at what our competitors are doing online to make sure we're not missing anything. In this whole article – it's probably the more recommended of the tools.

Finally, consider these all-purpose tips when piecing together your keywords and key phrases: liberally employ descriptive adjectives ( “top” and “free”); vary up your verbs; use both singular and plural permutations of critical words; rank for domain names if and when

appropriate; and research what your closest industry rivals do and plot out your marketing strategy at cross purposes, as well as on a parallel track, and see what true independent, even contrarian thinking can do for an enterprise. The bottom line, of course, is persistence and determination. You can get help, like this article, to work smarter. Working harder, of course, is up to you.

# 1522. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 03:23:03 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <48e43e8c$0$4842$9a6e19ea@unlimited.newshosting.com>
Source record: 4259

terry wrote:
> Understand that inside a typical computer switching power supply there
> is a higher multi kilohertz voltage (350v RMS????) produced by the
> switching action of the rectified 115 or 230 volt AC input?
>
> This high freq AC through various usually toroidal step down
> transforner windings is then rectified to provided the plus and minus
> 5, 12 volt outputs etc. Correct?
>
> We recently modified such a power supply to get a single 12 volt DC
> output at about 20 amps for a particular, amateur radio application.
> In order to do so we had to load one of the 5 volt ouputs with a
> couple of amps in order to get the unit to work; but that's normal.
>
> Question: Is it possible to get at that higher AC voltage inside and
> directly rectify it as a B+ supply for tube equipment? While also
> possibly tiddling one or more of the 5 volt DC outputs closer to 6.3
> volts for tube heaters?
>
> Rectified 10 or 20 kilohertz wouldn't need much filtering compared to
> 60 or 120 DC ripple of a conventiaonl power supply? Recall building a
> number of conventional 50 and 60 hertz power supplies many years ago
> with heavy chokes and large capacitors. But now have a number of
> slightly older ex computer power supplies of various wattages around.
>
> Or is the idea completly off base?

The "higher voltage" is usually on the line side of the isolation
transformer. You would create a safety hazard by accessing that voltage.

A thought might be to use the non-rectified low voltage side to drive a
small high frequency step up transformer or use a diode voltage
multiplier circuit or a combination of transformer and voltage multiplier.

There is a company that builds high voltage switchers for amateur radio
amplifiers, and there have been construction articles to build these.
(Check QEX magazine).

Building from a surplus PC power supply would have a cost advantage.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1523. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 05:54:50 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <XbKdnXsqxqu3_3nVnZ2dnUVZ_qrinZ2d@comcast.com>
Source record: 4260

"RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
news:48e43e8c$0$4842$9a6e19ea@unlimited.newshosting.com...
> terry wrote:
>> Understand that inside a typical computer switching power supply there
>> is a higher multi kilohertz voltage (350v RMS????) produced by the
>> switching action of the rectified 115 or 230 volt AC input?
>>
>> This high freq AC through various usually toroidal step down
>> transforner windings is then rectified to provided the plus and minus
>> 5, 12 volt outputs etc. Correct?
>>
>> We recently modified such a power supply to get a single 12 volt DC
>> output at about 20 amps for a particular, amateur radio application.
>> In order to do so we had to load one of the 5 volt ouputs with a
>> couple of amps in order to get the unit to work; but that's normal.
>>
>> Question: Is it possible to get at that higher AC voltage inside and
>> directly rectify it as a B+ supply for tube equipment? While also
>> possibly tiddling one or more of the 5 volt DC outputs closer to 6.3
>> volts for tube heaters?
>>
>> Rectified 10 or 20 kilohertz wouldn't need much filtering compared to
>> 60 or 120 DC ripple of a conventiaonl power supply? Recall building a
>> number of conventional 50 and 60 hertz power supplies many years ago
>> with heavy chokes and large capacitors. But now have a number of
>> slightly older ex computer power supplies of various wattages around.
>>
>> Or is the idea completly off base?
>
> The "higher voltage" is usually on the line side of the isolation transformer.
> You would create a safety hazard by accessing that voltage.
>
> A thought might be to use the non-rectified low voltage side to drive a small
> high frequency step up transformer or use a diode voltage multiplier circuit
> or a combination of transformer and voltage multiplier.
>
> There is a company that builds high voltage switchers for amateur radio
> amplifiers, and there have been construction articles to build these. (Check
> QEX magazine).
>
> Building from a surplus PC power supply would have a cost advantage.
>
> --

> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"&#65533;
>

There's a schematic of a typical (although a bit dated) ATX power supply that shows the concept of a PC power supply design at http://www.pavouk.org/hw/en_atxps.html. Current models might use different components but the basic design will be the same.
Here, you can easily see the building blocks of the supply and how the various voltages are generated.
There's also a link on that page (http://www.webx.dk/oz2cpu/radios/psu-pc1.htm) that demonstrates a way to modify a power supply for high current +13.8V output.

Modification for HV output would obviously involve rewinding the switching transformer to give it a HV winding.

--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

Life is like a roll of toilet paper; the closer it gets to the end, the faster it goes.

# 1524. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 07:31:34 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <LRnYVMKWjH5IFAzt@ifwtech.co.uk>
Source record: 4261

RFI-EMI-GUY wrote:
>
>There is a company that builds high voltage switchers for amateur radio
>amplifiers, and there have been construction articles to build these.
>(Check QEX magazine).
>
Regrettably the author of the key article, and owner of the company
"Watts Unlimited", died a few years ago.

The commercial unit followed some years after the QEX article. It
contained a number of important improvements but schematics were never
published. The big unanswered question is why that design had no voltage
feedback, and therefore had quite poor output regulation? (We can only
speculate that a feedback loop must surely have been tried, but proved
unworkable... and then wonder why that should be?)

An example application for the commercial unit:
http://www.gare.co.uk/k5and/8877.htm

>Building from a surplus PC power supply would have a cost advantage.
>
These days, tube RF amplifiers only begin to show a clear advantage over
solid-state at 500-1000W RF output, ie 1-2kW DC input. That is way
beyond the capabilities of PC power supplies.

A small-scale project based on a PC supply would be a good way to begin
to understand the problems, at relatively little cost, but it would be
another big step to build (or modify) a much larger SMPS for a serious
tube amplifier.

--

73 from Ian GM3SEK
http://www.ifwtech.co.uk/g3sek

# 1525. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 08:19:07 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <f9a58633-fef4-464c-92d6-b5178bc17586@c65g2000hsa.googlegroups.com>
Source record: 4262

> 
> The "higher voltage" is usually on the line side of the isolation
> transformer. You would create a safety hazard by accessing that voltage.

> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"©
,

Pshaw

I used to make a living fixing TV sets that ran off of the mains wit
no isolation. Needless to say there were millions of these TV's back
in the day, The trick was to use half wave rectification.
You can do the same thing with a PC supply. Instead of using an AC
input you would half wave rectify the AC and and a suitible filter
capacitor to make up for the frequency change. Also you has to use the
neutral as ground, and use a polarized plug in the USA, Now it's true
if the wall outlet got wired the wrong way you could be in for a treat
of epic proportions. So a GFI would be in there somewheres to protect
you. Then your HV DC ground will be at neutral. At which point you
could use a Voltage multiplier to get close to any whole number
multiple of the mains voltage.

Now it's true you you may not get away with this trick on 3 phase or
split phase 220 mains, because then where is the neutral?

73 OM

n8zu

# 1526. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 08:29:22 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <cfbc3b1a-5348-424c-9ea2-d808ef4dcebc@u28g2000hsc.googlegroups.com>
Source record: 4263

On Oct 1, 12:55 pm, terry <tsanf...@nf.sympatico.ca> wrote:

>
> We recently modified such a power supply to get a single 12 volt DC
> output at about 20 amps for a particular, amateur radio application.
> In order to do so we had to load one of the 5 volt ouputs with a
> couple of amps in order to get the unit to work; but that's normal.

Hey terry

I did that very same thing loaded the 5volt with 5ohm at 5 watt.
Ran my TenTec 526 off the 12 volt side of the PC power supply.
I thought it was the sweetest thing since sliced bread. Then
people started telling me I had this strange background noise.
They asked me what was going on in my shack. I had this strange
eerie noise in my shack, so they thought. Wasn't in my shack per
say but it was the PC power supply. Nobody knew I was running
a PC supply to power my rig.

73 OM

n7zu

# 1527. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 13:37:03 UTC
From: jimmie68@gmail.com
Message-ID: <16a3bee8-5fab-48f0-855f-f453c159d47e@t54g2000hsg.googlegroups.com>
Source record: 4264

On Oct 2, 4:29 am, raypsi <RBorow...@gmail.com> wrote:
> On Oct 1, 12:55 pm, terry <tsanf...@nf.sympatico.ca> wrote:
>
>
>
> > We recently modified such a power supply to get a single 12 volt DC
> > output at about 20 amps for a particular, amateur radio application.
> > In order to do so we had to load one of the 5 volt ouputs with a
> > couple of amps in order to get the unit to work; but that's normal.
>
> Hey terry
>
> I did that very same thing loaded the 5volt with 5ohm at 5 watt.
> Ran my TenTec 526 off the 12 volt side of the PC power supply.
> I thought it was the sweetest thing since sliced bread. Then
> people started telling me I had this strange background noise.
> They asked me what was going on in my shack. I had this strange
> eerie noise in my shack, so they thought. Wasn't in my shack per
> say but it was the PC power supply. Nobody knew I was running
> a PC supply to power my rig.
>
> 73 OM
>
> n7zu

I also use a modified PC power supply with no problems. I did add a
filter removed
from a commercial computer SMPS. I dont know the values of the
components but its a Pi filter
and the inductor is wound on what looks like a ferrite rod. The caps
are some pretty big disk
that had the writing rubbed off of them a long time ago. As Grumpy put
it. I like to "Frankenstien"
some of my projects.

I have been giving some thought as to what it would take to modify a
PC power supply for HV use.
I have been thinking along two lines,

1 Connect a second step-up transformer before the rectifiers.
2 Replace the transformer with one with a HV windingputting a 5volt
winding on the new
transformer for loading and feedback.

Jimmie

# 1528. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-02 15:48:23 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <e5981e4e-5490-4883-8145-bf1107cb4ce5@l42g2000hsc.googlegroups.com>
Source record: 4265

On Sep 30, 7:37 pm, "Joel Koltner" <zapwireDASHgro...@yahoo.com>
wrote:
> I'm thinking it'd be a rather poor idea to make a reference oscillator for a
> DDS (or PLL) equal in frequency to an IF somewhere in your radio... right?
> Since you're just asking for it to get into the IF itself?
>
> In the ideal world, would one choose reference oscillator frequencies that
> weren't harmonically related to IFs?  I've seen those "IF planning"
> spreadsheets (that calculator where mixer spurs are going to fall), and such a
> choice seems like a good start.
>
> Thanks,
> ---Joel Koltner

Joel -
In fact the BFO for your radio is already in the IF bandwidth, and
there probably is some leakage into the IF amp.

For most applications, you don't notice that leakage unless you
wonder why your AGC is kicking in but you aren't hearing anything.

I have found that keeping the BFO out of the IF, especially for a
diode-mixer-level BFO (+7dBm) requires putting the BFO in a box.

I would expect that putting your DDS in a box will help in general.

Tim.

# 1529. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-03 06:12:39 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <3fSdnaixQtlTKnjVnZ2dnUVZ_uqdnZ2d@web-ster.com>
Source record: 4266

Erich wrote:
> Tim Wescott wrote:
>> Joel Koltner wrote:
>>> I'm thinking it'd be a rather poor idea to make a reference
>>> oscillator for a DDS (or PLL) equal in frequency to an IF somewhere
>>> in your radio... right? Since you're just asking for it to get into
>>> the IF itself?
>>>
>>> In the ideal world, would one choose reference oscillator frequencies
>>> that weren't harmonically related to IFs? I've seen those "IF
>>> planning" spreadsheets (that calculator where mixer spurs are going
>>> to fall), and such a choice seems like a good start.
>>
>> I would certainly avoid it. With thorough enough shielding you can
>> keep just about any signal out of any circuit, but there's no need to
>> tempt fate.
>>
> If you have a decent receiver, you would need over 100db of isolation.
> That is very hard to get in a small space. One of the arts of receiver
> design is taking care that all of the frequencies and mixing products
> don't show up in the passband.
>
> Erich N6FD

I was thinking of several layers of milled-from-billet cabinets between
the signal and the receiver. I suppose I should have mentioned just
what I meant by "enough".

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

## 1530. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-03 16:39:25 UTC
From: Joel Koltner <zapwireDASHgroups@yahoo.com>
Message-ID: <8VrFk.154649$vK2.126144@en-nntp-03.dc1.easynews.com>
Source record: 4267

"Tim Wescott" <tim@seemywebsite.com> wrote in message
news:3fSdnaixQtlTKnjVnZ2dnUVZ_uqdnZ2d@web-ster.com...
> I was thinking of several layers of milled-from-billet cabinets between the
> signal and the receiver. I suppose I should have mentioned just what I
> meant by "enough".

Surely it's easier to take the circuit; wrap it in kapton tape, hold it by the output leads, and dip the entire thing into molten lead? :-)

# 1531. Radio Oktoberfest

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-04 00:18:56 UTC
From: Yuri Blanarovich <K3BU@optonline.net>
Message-ID: <48e6b672$0$5654$607ed4bc@cv.net>
Source record: 4268

Guten Tag Radio Aficionados!

Great opportunity to get out and have some fun with ham friends. The special table is reserved for those wearing their callsign hat or badge. Come and celebrate Yuri's 50 years in ham radio and check out this site for future Ham radio conventions the MountainView Resort in Glen Spey, NY.

As you may know, the Ardmore Mansion has been elegantly renovated this past year. Our motel units are currently being refurbished and the Black Sea Ballroom and Brew Pub are beaming with restored wood floors and new interiors. Our new pavilion is almost finished and will be ready for large outdoor events.

We are gearing up now for Oktoberfest, which will be held on Columbus Day weekend, October 11-12, bigger and better than ever. We will be featuring authentic German food and specialty Oktoberfest German beer, vendors, and games for adults and kids alike! The highlight of the evening is Jagermeister's own Fritz's Polka Band, performing live at the Saturday night dance. Also, for two nights only, Dark Forest, the area's premier Halloween events company, is presenting a Haunted House at neighboring Burn Brea Mansion. They will be celebrating the mansion's 100th anniversary by charging the same rates ($10 per person) they charged the last time the show was presented, 10 years ago! Transportation to and from Mountain View will be provided at no additional charge.

On Friday night, October 31, we are hosting a Halloween Masquerade Ball, with costume contests, dancing, and a frightfully fun time for all! Ages 21 and over, please. Then, on Saturday November 1, we present our Fall Festival & Market. Come and sample the best of the area, and enjoy the leaves changing colors while sipping on Mountain View's specialty cider.

Please check the web site for the latest news and programs at www.MVresort.com and check out or download the posters for more information. Spread the news, bring a friend and see the progress at MountainView. We are building our mailing lists and soon will have regular newsletters informing our patrons about the latest and upcoming events at the resort. Please pass on email or postal addresses so we can stay in touch.

See you at MountainView!

Yuri and the crew
please email me if you are coming
K3BU@optimum.net

# 1532. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-04 03:51:45 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <b7ccaf6d-961e-404e-8c30-a10e36f52fb1@b1g2000hsg.googlegroups.com>
Source record: 4269

On Oct 2, 11:37 am, jimmi...@gmail.com wrote:
> On Oct 2, 4:29 am, raypsi <RBorow...@gmail.com> wrote:
>
>
>
>
>
> > On Oct 1, 12:55 pm, terry <tsanf...@nf.sympatico.ca> wrote:
>
> > > We recently modified such a power supply to get a single 12 volt DC
> > > output at about 20 amps for a particular, amateur radio application.
> > > In order to do so we had to load one of the 5 volt outputs with a
> > > couple of amps in order to get the unit to work; but that's normal.
>
> > Hey terry
>
> > I did that very same thing loaded the 5volt with 5ohm at 5 watt.
> > Ran my TenTec 526 off the 12 volt side of the PC power supply.
> > I thought it was the sweetest thing since sliced bread. Then
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> > They asked me what was going on in my shack. I had this strange
> > eerie noise in my shack, so they thought. Wasn't in my shack per
> > say but it was the PC power supply. Nobody knew I was running
> > a PC supply to power my rig.
>
> > 73 OM
>
> > n7zu
>
> I also use a modified PC power supply with no problems. I did add a
> filter removed
> from a commercial computer SMPS. I don't know the values of the
> components but its a Pi filter
> and the inductor is wound on what looks like a ferrite rod. The caps
> are some pretty big disk
> that had the writing rubbed off of them a long time ago. As Grumpy put
> it. I like to "Frankenstien"
> some of my projects.
>
> I have been giving some thought as to what it would take to modify a
> PC power supply for HV use.
> I have been thinking along two lines,
>
> 1 Connect a second step-up transformer before the rectifiers.

> 2 Replace the transformer with one with a HV winding putting a 5volt
> winding on the new
> transformer for loading and feedback.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

Great info: Thanks for all the ideas and especially about the warning that the HV would be on the line side (input) from115/230 volt mains. Unless a 60 hertz full isolation transformer were used; the weight and size of which sort of negates the idea of using a lighter weight SPS!

I too used to fix TVs without power transformers, using selenium rectifiers (boy could they stink!) and voltage doubler circuits to provide B+. That was back in the mid late 1950s. I also made up a little B+ power supply in a box clipped in during house calls to show a customer that the problem was indeed inside the chassis and it had to be taken away for a 'bench job'!

By that and means of never charging for a house call if I didn't fix the set in situ; built up a reputation for straightforward dealing which, despite the slightly funny accent of a British immigrant to Canada, some 15 years later, may have helped me become elected to the areas first town council? And that in a day and age when TV repairmen didn't have the best reputation in the world (well at least around here) for ethical dealings!

These days customers are a lot more cynical and questioning; and rightly so!

BTW first heard about SPS in the telephone industry, before PC were common; when power supplier representatives started telling us about 'rectifier/power supplies' that had efficiencies of over 80%.

# 1533. Re: Reference oscillator frequency = IF?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-04 15:45:30 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <j7idnSFOqLgQEnrVnZ2dnUVZ_gqdnZ2d@web-ster.com>
Source record: 4270

Joel Koltner wrote:
> "Tim Wescott" <tim@seemywebsite.com> wrote in message
> news:3fSdnaixQtlTKnjVnZ2dnUVZ_uqdnZ2d@web-ster.com...
>> I was thinking of several layers of milled-from-billet cabinets between the
>> signal and the receiver. I suppose I should have mentioned just what I
>> meant by "enough".
>
> Surely it's easier to take the circuit; wrap it in kapton tape, hold it by the
> output leads, and dip the entire thing into molten lead? :-)
>
>
That's right. We're radio amateurs. I forgot...

What flux makes lead stick to Kapton?

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 1534. 2 METER, 440 DUPLEXER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-04 18:14:10 UTC
From: justme <jbleaux@gmail.com>
Message-ID: <2851ak.6p2.19.1@news.alt.net>
Source record: 4271

Someone has one of these just gathering dust. Please sell it to me.

Thanks

# 1535. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-04 21:49:56 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <48e7e504$0$6167$2318a52a@unlimited.newshosting.com>
Source record: 4272

Ian White GM3SEK wrote:
> RFI-EMI-GUY wrote:
>>
>> There is a company that builds high voltage switchers for amateur
>> radio amplifiers, and there have been construction articles to build
>> these. (Check QEX magazine).
>>
> Regrettably the author of the key article, and owner of the company
> "Watts Unlimited", died a few years ago.
>
> The commercial unit followed some years after the QEX article. It
> contained a number of important improvements but schematics were never
> published. The big unanswered question is why that design had no voltage
> feedback, and therefore had quite poor output regulation? (We can only
> speculate that a feedback loop must surely have been tried, but proved
> unworkable... and then wonder why that should be?)
(snip)

I worked on a 13.8 Volt SMPS made by TODD for Motorola as an OEM without any documentation. There was a large stud mounted 13.8 Volt zener on the output to clamp the voltage and some op amp circuitry to sense if the output voltage fell below 13.8V it would start increasing the PWM to charge the filter caps. This PS apparently never worked right because the transformer leads were never soldered and then were plastered in conformal coating.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1536. Re: 2 METER, 440 DUPLEXER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-05 05:33:39 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <TkYFk.773$yI6.409@nwrddc01.gnilink.net>
Source record: 4273

"justme" <jbleaux@gmail.com> wrote in message
news:2851ak.6p2.19.1@news.alt.net...
> Someone has one of these just gathering dust. Please sell it to me.
>
> Thanks
>
>
The correct term (no matter what the manufacturers say) is diplexer.

Dale W4OP

# 1537. Kenwood TS-140S All modes squelch modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-05 14:27:04 UTC
From: T0M <viepriv&#65533;e@fra.invalid>
Message-ID: <qkjhe4lhf0qogcv5n2a776vegd09n0a2mu@4ax.com>
Source record: 4275

I know it's possible to do a modifiction to have the squelch working in
all modes with a Kenwood TS-14S.
I would like to know if some of you have already made this mod and if it
really works.

Thank you in advance,

T0M

# 1538. Re: 2 METER, 440 DUPLEXER

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-05 14:31:57 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <PLCdnZw3XNvhXHXVnZ2dnUVZ_j-dnZ2d@earthlink.com>
Source record: 4274

"Dale Parfitt" <parinc1@verizon.net> wrote in message
news:TkYFk.773$yI6.409@nwrddc01.gnilink.net...
>
> "justme" <jbleaux@gmail.com> wrote in message
> news:2851ak.6p2.19.1@news.alt.net...
>> Someone has one of these just gathering dust. Please sell it to me.
>>
>> Thanks
>>
>>
> The correct term (no matter what the manufacturers say) is diplexer.
>
> Dale W4OP

Sure it is the correct term, but when the manufacture call it a duplexer,
that is what you look for. They are even listed that way in most ham
catalogs. I doubt that you will find a diplexer listed in the ham catalogs.

The AES catalog lists Comet,Diamond , and MFJ duplexers and triplexers, but
not a single diplexer is listed.

# 1539. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-05 19:31:53 UTC
From: jimmie68@gmail.com
Message-ID: <adcef3f2-40d0-4d81-a462-da264853dfef@k37g2000hsf.googlegroups.com>
Source record: 4276

On Oct 3, 11:51 pm, terry <tsanf...@nf.sympatico.ca> wrote:
> On Oct 2, 11:37 am, jimmi...@gmail.com wrote:
>
>
>
>
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>
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> > are some pretty big disk
> > that had the writing rubbed off of them a long time ago. As Grumpy put
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> > some of my projects.
>
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> > PC power supply for HV use.
> > I have been thinking along two lines,

> 
> > 1 Connect a second step-up transformer before the rectifiers.
> > 2 Replace the transformer with one with a HV winding putting a 5volt
> > winding on the new
> > transformer for loading and feedback.
> 
> > Jimmie- Hide quoted text -
> 
> > - Show quoted text -
> 
> Great info: Thanks for all the ideas and especially about the warning
> that the HV would be on the line side (input) from115/230 volt mains.
> Unless a 60 hertz full isolation transformer were used; the weight and
> size of which sort of negates the idea of using a lighter weight SPS!
> 
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> rectifiers (boy could they stink!) and voltage doubler circuits to
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> These days customers are a lot more cynical and questioning; and
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> BTW first heard about SPS in the telephone industry, before PC were
> common; when power supplier representatives started telling us about
> 'rectifier/power supplies' that had efficiencies of over 80%.- Hide quoted text -
> 
> - Show quoted text -

The 300 volts you wanted is on the input side of the power supply, not
what you wanted. This does not mean that the output of the power
supply is not isolated from the mains. The type of switching power
supply you wanted is probably doable. Think about removing the output
transformer from a PC power supply and connecting it back to back with
the transformer in a working power supply. The output could be
rectified and filtered and you would have a cheap to free lightweight
line isolated HV power supply. I am in thr process of trying this. I
not getting much work done on it due to my present work schedule but
in a few weeks things should get back to normal and I will have a
chance to play with my toys some more.

I am just getting in to SMPSs and find it amazing what these things willl do.
For example I found a a +- 15 volt unit that puts out 100 amps for each voltage. I can hold the output transformers in my hand, they couldnt weigh more than a pound each.

Jimmie

# 1540. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-05 23:17:44 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <48e94b16$0$8500$9a6e19ea@unlimited.newshosting.com>
Source record: 4277

jimmie68@gmail.com wrote:
> On Oct 3, 11:51 pm, terry <tsanf...@nf.sympatico.ca> wrote:
>> On Oct 2, 11:37 am, jimmi...@gmail.com wrote:
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>>
>>
>>
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>>> and the inductor is wound on what looks like a ferrite rod. The caps
>>> are some pretty big disk
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>> size of which sort of negates the idea of using a lighter weight SPS!
>>
>> I too used to fix TVs without power transformers, using selenium
>> rectifiers (boy could they stink!) and voltage doubler circuits to
>> provide B+. That was back in the mid late 1950s. I also made up a
>> little B+ power supply in a box clipped in during house calls to show
>> a customer that the problem was indeed inside the chassis and it had
>> to be taken away for a 'bench job'!
>>
>> By that and means of never charging for a house call if I didn't fix
>> the set in situ; built up a reputation for straightforward dealing
>> which, despite the slightly funny accent of a British immigrant to
>> Canada, some 15 years later, may have helped me become elected to the
>> areas first town council? And that in a day and age when TV repairmen
>> didn't have the best reputation in the world (well at least around
>> here) for ethical dealings!
>>
>> These days customers are a lot more cynical and questioning; and
>> rightly so!
>>
>> BTW first heard about SPS in the telephone industry, before PC were
>> common; when power supplier representatives started telling us about
>> 'rectifier/power supplies' that had efficiencies of over 80%.- Hide quoted text -
>>
>> - Show quoted text -
>
> The 300 volts you wanted is on the input side of the power supply, not
> what you wanted. This does not mean that the output of the power
> supply is not isolated from the mains. The type of switching power
> supply you wanted is probably doable. Think about removing the output
> transformer from a PC power supply and connecting it back to back with
> the transformer in a working power supply. The output could be
> rectified and filtered and you would have a cheap to free lightweight
> line isolated HV power supply. I am in thr process of trying this. I
> not getting much work done on it due to my present work schedule but
> in a few weeks things should get back to normal and I will have a
> chance to play with my toys some more.
>
> I am just getting in to SMPSs and find it amazing what these things
> willl do.
> For example I found a a +- 15 volt unit that puts out 100 amps for
> each voltage. I can hold the output transformers in my hand, they
> couldnt weigh more than a pound each.
>
> Jimmie

Pretty slick let us know how it works out.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1541. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-06 01:11:08 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B2ECD5632AE2MDWN@194.177.96.78>
Source record: 4278

You might find this useful Jimmie.

I had some time to cobble together a DC-DC "transformer" this weekend.
It is a half-bridge running at 200KHz and fixed 96% duty cycle. The
turns ratio is 1:24 and the output is full wave rectified. I'm using
an EDT29 core, I think the material is 3C90.

The rectified AC line was ~160V and the output was ~1800V (I'm using
a Simpson 260 so the voltages are thereabout.)

After running 300 watts though it for two hours the transformer wasn't
near warm. If I take this further I need to build a real load.
A bucket of distilled water and some magnesium sulfate (epsom salt)
isn't stable when it's boiling.

It's a small transformer and light. It's not regulated but I think it
could replace a much larger laminated steel transformer.

Takes a rainy day for me to find any motivation for stuff like this.
Maybe after winter arrives I'll build it up properly and try it in
the SB200.

73

jimmie68@gmail.com wrote in
news:adcef3f2-40d0-4d81-a462-da264853dfef@k37g2000hsf.googlegroups.com:

> The 300 volts you wanted is on the input side of the power supply, not
> what you wanted. This does not mean that the output of the power
> supply is not isolated from the mains. The type of switching power
> supply you wanted is probably doable. Think about removing the output
> transformer from a PC power supply and connecting it back to back with
> the transformer in a working power supply. The output could be
> rectified and filtered and you would have a cheap to free lightweight
> line isolated HV power supply. I am in thr process of trying this. I
> not getting much work done on it due to my present work schedule but
> in a few weeks things should get back to normal and I will have a
> chance to play with my toys some more.
>
> I am just getting in to SMPSs and find it amazing what these things
> willl do.
> For example I found a a +- 15 volt unit that puts out 100 amps for
> each voltage. I can hold the output transformers in my hand, they
> couldnt weigh more than a pound each.
>
> Jimmie
>

## 1542. New Jersey webcam: Landie

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-06 13:40:56 UTC
From: tyreemand@gmail.com
Message-ID: <185961b6-739f-4aea-891c-e8dae4ce60ec@c60g2000hsf.googlegroups.com>
Source record: 4279
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Webcam: Landie,19 year.New Jersey. Viens me voir et tu verras!
http://datesex.xhostar.com/landie1989.htm

## 1543. how to reduce charging time of capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-06 21:10:40 UTC
From: n.jrokzz2k@gmail.com
Message-ID: <af9e400d-b057-4cc8-8b19-4ae9179b3705@l33g2000pri.googlegroups.com>
Source record: 4280

here's nikesh jain from india want to know best mechanism for making an solarroller which takes less time to cross the 1mts arena in smallest possible time

# 1544. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-07 02:40:09 UTC
From: jimmie68@gmail.com
Message-ID: <520587cc-8466-4e1e-b715-9e60f699aed3@v72g2000hsv.googlegroups.com>
Source record: 4281

On Oct 5, 9:11 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> You might find this useful Jimmie.
>
> I had some time to cobble together a DC-DC "transformer" this weekend.
> It is a half-bridge running at 200KHz and fixed 96% duty cycle. The
> turns ratio is 1:24 and the output is full wave rectified. I'm using
> an EDT29 core, I think the material is 3C90.
>
> The rectified AC line was ~160V and the output was ~1800V (I'm using
> a Simpson 260 so the voltages are thereabout.)
>
> After running 300 watts though it for two hours the transformer wasn't
> near warm.  If I take this further I need to build a real load.
> A bucket of distilled water and some magnesium sulfate (epsom salt)
> isn't stable when it's boiling.
>
> It's a small transformer and light.  It's not regulated but I think it
> could replace a much larger laminated steel transformer.
>
> Takes a rainy day for me to find any motivation for stuff like this.
> Maybe after winter arrives I'll build it up properly and try it in
> the SB200.
>
> 73
>
> jimmi...@gmail.com wrote
innews:adcef3f2-40d0-4d81-a462-da264853dfef@k37g2000hsf.googlegroups.com:
>
>
>
> > The 300 volts you wanted is on the input side of the power supply, not
> > what you wanted. This does not mean that the output of the power
> > supply is not isolated from the mains. The type of switching power
> > supply you wanted is probably doable. Think about removing the output
> > transformer from a PC power supply and connecting it back to back with
> > the transformer in a working power supply. The output could be
> > rectified and filtered and you would have a cheap to free lightweight
> > line isolated HV power supply. I am in thr process of trying this. I
> > not getting much work done on it due to my present work schedule but
> > in a few weeks things should get back to normal and I will have a
> > chance to play with my toys some more.
>
> > I am just getting in to SMPSs and find it amazing what these things
> > willl do.

> > For example I found a a +- 15 volt unit that puts out 100 amps for
> > each voltage. I can hold the output transformers in my hand, they
> > couldnt weigh more than a pound each.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

Grumpy , when David Smith was testing out the uwave oven power supply
he use a big russian made triode as a dummy load.
Forgot the #, GS 35B or something like that. I was going to get one,
use it for a dummy load now and later build an amp if I dont blow it
up.
Jimmie

# 1545. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1223359501@panix.com>
Source record: 4282
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

# 1546. Re: how to reduce charging time of capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-07 17:53:43 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <e9f20187-9263-4782-85e0-84bcd5227837@b30g2000prf.googlegroups.com>
Source record: 4283

On Oct 6, 2:10 pm, n.jrokz...@gmail.com wrote:
> here's nikesh jain from india want to know best mechanism for making
> an solarroller which takes less time to cross the 1mts arena in
> smallest possible time

So I'm not sure what the question really is here. Do you want to charge a capacitor faster, or get some small vehicle to run faster over a particular course?

You can't escape physics: to charge a given capacitance more quickly, feed it more current. If the source of energy for charging it is greatest at a particular voltage (typical of a photovoltaic array), use an efficient converter to go from that voltage to the highest current you can achieve at the instantaneous capacitor voltage.

You can't escape physics: if you want a vehicle to traverse a path in the least time on a given amount of energy, reduce the losses (e.g. friction and air resistance) to a minimum. As a second-order effect, consider how inertia affects the speed too.

Though you can put some practical bounds on how well you should expect to be able to do, there are certainly many ways to arrive at a solution. Engineering solutions like this practically always involves compromises and tradeoffs. You get to decide how to best accomplish what you want to do, always under some constraints that generally include both explicit and implicit ones. Math is one of the tools you can use to optimize your solution: consider the equations for motion and loss of energy; consider the equations for conversion of energy from one form to another.

Cheers,
Tom

# 1547. Re: how to reduce charging time of capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-08 04:06:18 UTC
From: JB <nospam@goofball.net>
Message-ID: <_kWGk.1473$P5.370@nwrddc02.gnilink.net>
Source record: 4284

A resistor in series is the simplest way.

You can slow charge while powering a light load, then short the resistor into the load for a burst of current for a high load, but if that's not enough, will you still have enough to charge the capacitor AND power a medium load.

It won't get you up a hill, but it might be enough to get you rolling. Gearing change might be more versatile for the same weight

<n.jrokzz2k@gmail.com> wrote in message news:af9e400d-b057-4cc8-8b19-4ae9179b3705@l33g2000pri.googlegroups.com...
> here's nikesh jain from india want to know best mechanism for making
> an solarroller which takes less time to cross the 1mts arena in
> smallest possible time

# 1548. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-08 14:09:03 UTC
From: jimmie68@gmail.com
Message-ID: <c5bf56af-597a-412f-976e-f82a9a7265e4@d1g2000hsg.googlegroups.com>
Source record: 4285

On Oct 5, 9:11 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> You might find this useful Jimmie.
>
> I had some time to cobble together a DC-DC "transformer" this weekend.
> It is a half-bridge running at 200KHz and fixed 96% duty cycle. The
> turns ratio is 1:24 and the output is full wave rectified. I'm using
> an EDT29 core, I think the material is 3C90.
>
> The rectified AC line was ~160V and the output was ~1800V (I'm using
> a Simpson 260 so the voltages are thereabout.)
>
> After running 300 watts though it for two hours the transformer wasn't
> near warm.  If I take this further I need to build a real load.
> A bucket of distilled water and some magnesium sulfate (epsom salt)
> isn't stable when it's boiling.
>
> It's a small transformer and light.  It's not regulated but I think it
> could replace a much larger laminated steel transformer.
>
> Takes a rainy day for me to find any motivation for stuff like this.
> Maybe after winter arrives I'll build it up properly and try it in
> the SB200.
>
> 73
>
> jimmi...@gmail.com wrote
innews:adcef3f2-40d0-4d81-a462-da264853dfef@k37g2000hsf.googlegroups.com:
>
>
>
> > The 300 volts you wanted is on the input side of the power supply, not
> > what you wanted. This does not mean that the output of the power
> > supply is not isolated from the mains. The type of switching power
> > supply you wanted is probably doable. Think about removing the output
> > transformer from a PC power supply and connecting it back to back with
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> > rectified and filtered and you would have a cheap to free lightweight
> > line isolated HV power supply. I am in thr process of trying this. I
> > not getting much work done on it due to my present work schedule but
> > in a few weeks things should get back to normal and I will have a
> > chance to play with my toys some more.
>
> > I am just getting in to SMPSs and find it amazing what these things
> > willl do.

> > For example I found a a +- 15 volt unit that puts out 100 amps for
> > each voltage. I can hold the output transformers in my hand, they
> > couldnt weigh more than a pound each.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

I had a little time yesterday and opened up a PC power supply and brought the 3 taps off of the transformer out to binding post. The plan is to build a transformer that will step the voltage back up to about 800 volts or so, enough for my little 6146B 6M amp.

Jimmie.

JImmie

# 1549. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-08 14:09:44 UTC
From: jimmie68@gmail.com
Message-ID: <11654c97-cace-4df8-b1bd-09414ffc3106@z6g2000pre.googlegroups.com>
Source record: 4286

On Oct 6, 10:40 pm, jimmi...@gmail.com wrote:
> On Oct 5, 9:11 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
>
>
>
>
>
> > You might find this useful Jimmie.
>
> > I had some time to cobble together a DC-DC "transformer" this weekend.
> > It is a half-bridge running at 200KHz and fixed 96% duty cycle. The
> > turns ratio is 1:24 and the output is full wave rectified. I'm using
> > an EDT29 core, I think the material is 3C90.
>
> > The rectified AC line was ~160V and the output was ~1800V (I'm using
> > a Simpson 260 so the voltages are thereabout.)
>
> > After running 300 watts though it for two hours the transformer wasn't
> > near warm.  If I take this further I need to build a real load.
> > A bucket of distilled water and some magnesium sulfate (epsom salt)
> > isn't stable when it's boiling.
>
> > It's a small transformer and light.  It's not regulated but I think it
> > could replace a much larger laminated steel transformer.
>
> > Takes a rainy day for me to find any motivation for stuff like this.
> > Maybe after winter arrives I'll build it up properly and try it in
> > the SB200.
>
> > 73
>
> > jimmi...@gmail.com wrote
innews:adcef3f2-40d0-4d81-a462-da264853dfef@k37g2000hsf.googlegroups.com:
>
> > > The 300 volts you wanted is on the input side of the power supply, not
> > > what you wanted. This does not mean that the output of the power
> > > supply is not isolated from the mains. The type of switching power
> > > supply you wanted is probably doable. Think about removing the output
> > > transformer from a PC power supply and connecting it back to back with
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> > > rectified and filtered and you would have a cheap to free lightweight
> > > line isolated HV power supply. I am in thr process of trying this. I
> > > not getting much work done on it due to my present work schedule but
> > > in a few weeks things should get back to normal and I will have a

> > > chance to play with my toys some more.
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> > > I am just getting in to SMPSs and find it amazing what these things
> > > willl do.
> > > For example I found a a +- 15 volt unit that puts out 100 amps for
> > > each voltage. I can hold the output transformers in my hand, they
> > > couldnt weigh more than a pound each.
>
> > > Jimmie- Hide quoted text -
>
> > - Show quoted text -
>
> Grumpy , when David Smith was testing out the uwave oven power supply
> he use a big russian made triode as a dummy load.
> Forgot the #, GS 35B or something like that. I was going to get one,
> use it for a dummy load now and later build an amp if I dont blow it
> up.
> Jimmie- Hide quoted text -
>
> - Show quoted text -

should have been GU 35B

## 1550. eBay: some radio & parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-08 16:08:10 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <LV4Hk.2812$ZP4.2170@nlpi067.nbdc.sbc.com>
Source record: 4287

http://search.ebay.com/_W0QQsassZwd5jfrQQfrppZ50QQfsopZ32QQfsooZ2QQrdZ0

# 1551. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-08 23:47:00 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B31BF144518D2MDWN@194.177.96.78>
Source record: 4288

What will you use for an inductor in the output filter
following the second transformer?

jimmie68@gmail.com wrote in
news:c5bf56af-597a-412f-976e-f82a9a7265e4@d1g2000hsg.googlegroups.com:

> I had a little time yesterday and opened up a PC power supply and
> brought the 3 taps off of the transformer out to binding post. The
> plan is to build a transformer that will step the voltage back up to
> about 800 volts or so, enough for my little 6146B 6M amp.
>
> Jimmie.

# 1552. Halle Berry's uncut Sex Scene in Monsters Ball

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-09 16:25:46 UTC
From: tyreemand@gmail.com
Message-ID: <7d70eba9-b856-4417-8615-0da41e4e43ec@u29g2000pro.googlegroups.com>
Source record: 4289
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Halle Berry's uncut Sex Scene in Monsters Ball
http://spirs_manyac.googlegroups.com/web/halle
berry.htm

# 1553. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 02:42:06 UTC
From: jimmie68@gmail.com
Message-ID: <d1314eb0-8138-4a4c-8361-f59d15455d25@f77g2000hsf.googlegroups.com>
Source record: 4290

On Oct 8, 7:47 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> What will you use for an inductor in the output filter
> following the second transformer?
>
> jimmi...@gmail.com wrote
innews:c5bf56af-597a-412f-976e-f82a9a7265e4@d1g2000hsg.googlegroups.com:
>
>
>
> > I had a little time yesterday and opened up a PC power supply and
> > brought the 3 taps off of the transformer out to binding post. The
> > plan is to build a transformer that will step the voltage back up to
> > about 800 volts or so, enough for my little 6146B 6M amp.
>
> > Jimmie.- Hide quoted text -
>
> - Show quoted text -

Like you said I like to Frankenstien things. I have a filter from
another power supply but I am not sure how well it will work
as it was designed for about 25 amps. Basically thats a bridge I will
jump off of when I come to it. Right now I am having enough trouble
finding an old PC power supply I can get a transformer from. Its hard
to believe about a couple of months ago I tossed about a dozen of
them. Last time I listen to my wife. I do have a couple of
transformers from some old Lambda power supplies. Thes are some really
nice ones probably capable of handling a couple of Kwatts. Im not
ready to experiment with them yet. Although this is learning by
destuction it's cautious destruction. I will probably take a trip down
to the local computer place this weekend and do a little dumpster
diving or make a run on the goodwill store and see what I can get for
$10. IF you havent figured it out by now I love building things from
others discards. When I was in high schooI I built a killer stereo, I
thought at the time, from old stuff I found in the dump that was the
envy of most of my friends. Ive enjoyed doing it ever since.

Jimmie

Jimmie

# 1554. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 03:11:40 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B32E1C6B39D82MDWN@194.177.96.78>
Source record: 4291

Cobbling stuff together is lots of fun. From Pressman's
book you can figure out the inductor value.

I'm guessing a powdered iron toroid from the output of a PC
power supply would work. Probably need quite a few turns of
moderate size ~22AWG magnet wire. Maybe 300 turns... ugh.
Makes my hands hurt just thinking about it. I guess a bobbin
wound inductor would be better. Gapped ferrite isn't bad!

Check this site http://schmidt-walter.eit.h-da.de/smps_e/smps_e.html

I try to stay away from dumpsters but if I see anything electrical
or electronic in one it's neigh impossible.

jimmie68@gmail.com wrote in
news:d1314eb0-8138-4a4c-8361-f59d15455d25@f77g2000hsf.googlegroups.com:
>
> Like you said I like to Frankenstien things. I have a filter from
> another power supply but I am not sure how well it will work
> as it was designed for about 25 amps. Basically thats a bridge I will
> jump off of when I come to it. Right now I am having enough trouble
> finding an old PC power supply I can get a transformer from. Its hard
> to believe about a couple of months ago I tossed about a dozen of
> them. Last time I listen to my wife. I do have a couple of
> transformers from some old Lambda power supplies. Thes are some really
> nice ones probably capable of handling a couple of Kwatts. Im not
> ready to experiment with them yet. Although this is learning by
> destuction it's cautious destruction. I will probably take a trip down
> to the local computer place this weekend and do a little dumpster
> diving or make a run on the goodwill store and see what I can get for
> $10. IF you havent figured it out by now I love building things from
> others discards. When I was in high schooI I built a killer stereo, I
> thought at the time, from old stuff I found in the dump that was the
> envy of most of my friends. Ive enjoyed doing it ever since.
>
> Jimmie

## 1555. Hellenedyne: a new type of regen-reflex radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 05:15:03 UTC
From: just_rtfm@yahoo.com
Message-ID: <e26d552c-9837-4a9f-aea8-49f4de517652@k16g2000hsf.googlegroups.com>
Source record: 4292

hi everyone:

i designed a new type of regen-reflex radio called the Hellenedyne. it uses a single triode in cathode follower mode at RF and in grounded grid mode at AF. the tube i selected needs only 18 volts of plate. it can be used with low-impedance earbuds for good sound. output is high compared to an Armstrong regenerator. if you love single tube designs you must try this one! explaination and circuit are available at my website:

http://home.comcast.net/~phils_radio_designs/index.htm

regards,
phil :)

PS if you wish to contact me feel free to send an e-mail

# 1556. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 11:37:46 UTC
From: jimmie68@gmail.com
Message-ID: <63056c2d-986b-447d-bc21-6a61c83209c2@1g2000prd.googlegroups.com>
Source record: 4293

On Oct 9, 11:11 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Cobbling stuff together is lots of fun.  From Pressman's
> book you can figure out the inductor value.
>
> I'm guessing a powdered iron toroid from the output of a PC
> power supply would work.  Probably need quite a few turns of
> moderate size ~22AWG magnet wire.  Maybe 300 turns...  ugh.
> Makes my hands hurt just thinking about it.  I guess a bobbin
> wound inductor would be better.  Gapped ferrite isn't bad!
>
> Check this sitehttp://schmidt-walter.eit.h-da.de/smps_e/smps_e.html
>
> I try to stay away from dumpsters but if I see anything electrical
> or electronic in one it's neigh impossible.
>
> jimmi...@gmail.com wrote
innews:d1314eb0-8138-4a4c-8361-f59d15455d25@f77g2000hsf.googlegroups.com:
>
>
>
>
>
> > Like you said I like to Frankenstien things. I have a filter from
> > another power supply but I am not sure how well it will work
> > as it was designed for about 25 amps. Basically thats a bridge I will
> > jump off of when I come to it. Right now I am having enough trouble
> > finding an old PC power supply I can get a transformer from. Its hard
> > to believe about a couple of months ago I tossed about a dozen of
> > them. Last time I listen to my wife. I do have a couple of
> > transformers from some old Lambda power supplies. Thes are some really
> > nice ones probably capable of handling a couple of  Kwatts. Im not
> > ready to experiment with them yet. Although this is learning by
> > destuction it's cautious destruction. I will probably take a trip down
> > to the local computer place this weekend and do a little dumpster
> > diving or make a run on the goodwill store and see what I can get for
> > $10. IF you havent figured it out by now I love building things from
> > others discards. When I was in high schooI  I built a killer stereo, I
> > thought at the time, from old stuff I found in the dump that was the
> > envy of most of my friends. Ive enjoyed doing it ever since.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

From what I gather fro mthe website there is little danger in making L to large within reason so I can expect my bits and pieces removed from old power supplies to work. If they dont its probably because its too small.

Jimmie

# 1557. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 13:34:17 UTC
From: jimmie68@gmail.com
Message-ID: <7c5a1a81-f131-4002-b626-1f6b49b28e5a@p58g2000hsb.googlegroups.com>
Source record: 4294

On Oct 9, 11:11 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Cobbling stuff together is lots of fun.  From Pressman's
> book you can figure out the inductor value.
>
> I'm guessing a powdered iron toroid from the output of a PC
> power supply would work.  Probably need quite a few turns of
> moderate size ~22AWG magnet wire.  Maybe 300 turns...  ugh.
> Makes my hands hurt just thinking about it.  I guess a bobbin
> wound inductor would be better.  Gapped ferrite isn't bad!
>
> Check this sitehttp://schmidt-walter.eit.h-da.de/smps_e/smps_e.html
>
> I try to stay away from dumpsters but if I see anything electrical
> or electronic in one it's neigh impossible.
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> jimmi...@gmail.com wrote
innews:d1314eb0-8138-4a4c-8361-f59d15455d25@f77g2000hsf.googlegroups.com:
>
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>
>
> > Like you said I like to Frankenstien things. I have a filter from
> > another power supply but I am not sure how well it will work
> > as it was designed for about 25 amps. Basically thats a bridge I will
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> > them. Last time I listen to my wife. I do have a couple of
> > transformers from some old Lambda power supplies. Thes are some really
> > nice ones probably capable of handling a couple of  Kwatts. Im not
> > ready to experiment with them yet. Although this is learning by
> > destuction it's cautious destruction. I will probably take a trip down
> > to the local computer place this weekend and do a little dumpster
> > diving or make a run on the goodwill store and see what I can get for
> > $10. IF you havent figured it out by now I love building things from
> > others discards. When I was in high schooI  I built a killer stereo, I
> > thought at the time, from old stuff I found in the dump that was the
> > envy of most of my friends. Ive enjoyed doing it ever since.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

The computer aided design was a big help. I figured 16mH. I think I have something about that size. I have a 20mH choke at one amp that may work.
What you think Grumpy.

Jimmie

# 1558. Enormous amount webcams womans showing groupsex. Free

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 13:56:57 UTC
From: tyreemand@gmail.com
Message-ID: <eb71d972-58de-4bf2-a317-56eccc67cee0@8g2000hse.googlegroups.com>
Source record: 4295
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Enormous amount webcams womans showing groupsex. http://sexystory.psend.com/groupsex.htm

# 1559. Adonis AM-802 Desk Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 15:31:26 UTC
From: Ken <ken@g3msw.demon.co.uk>
Message-ID: <gcnsgf$2j9$1$8302bc10@news.demon.co.uk>
Source record: 4296

an anyone help with a scematic for this, please?

# 1560. Motorola HF receiver Micom-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-10 18:22:04 UTC
From: moreradio <moreradio@alice.it>
Message-ID: <48ef9d4a$0$1089$4fafbaef@reader1.news.tin.it>
Source record: 4297

Hello,
I'm looking for some expertise on how to convert the receiver I have, without tuning wheel, in a receiver with tuning wheel. I tryed to install a suitable shaft encoder but it seems to me it need different fw version. Any help?

Claudio

# 1561. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-11 16:48:46 UTC
From: jimmie68@gmail.com
Message-ID: <22bd0d76-981f-4fce-bb3d-da3ac469afc2@r66g2000hsg.googlegroups.com>
Source record: 4298

On Oct 10, 9:34 am, jimmi...@gmail.com wrote:
> On Oct 9, 11:11 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
>
>
>
>
>
> > Cobbling stuff together is lots of fun.  From Pressman's
> > book you can figure out the inductor value.
>
> > I'm guessing a powdered iron toroid from the output of a PC
> > power supply would work.  Probably need quite a few turns of
> > moderate size ~22AWG magnet wire.  Maybe 300 turns...  ugh.
> > Makes my hands hurt just thinking about it.  I guess a bobbin
> > wound inductor would be better.  Gapped ferrite isn't bad!
>
> > Check this sitehttp://schmidt-walter.eit.h-da.de/smps_e/smps_e.html
>
> > I try to stay away from dumpsters but if I see anything electrical
> > or electronic in one it's neigh impossible.
>
> > jimmi...@gmail.com wrote
innews:d1314eb0-8138-4a4c-8361-f59d15455d25@f77g2000hsf.googlegroups.com:
>
> > > Like you said I like to Frankenstien things. I have a filter from
> > > another power supply but I am not sure how well it will work
> > > as it was designed for about 25 amps. Basically thats a bridge I will
> > > jump off of when I come to it. Right now I am having enough trouble
> > > finding an old PC power supply I can get a transformer from. Its hard
> > > to believe about a couple of months ago I tossed about a dozen of
> > > them. Last time I listen to my wife. I do have a couple of
> > > transformers from some old Lambda power supplies. Thes are some really
> > > nice ones probably capable of handling a couple of  Kwatts. Im not
> > > ready to experiment with them yet. Although this is learning by
> > > destuction it's cautious destruction. I will probably take a trip down
> > > to the local computer place this weekend and do a little dumpster
> > > diving or make a run on the goodwill store and see what I can get for
> > > $10. IF you havent figured it out by now I love building things from
> > > others discards. When I was in high schooI  I built a killer stereo, I
> > > thought at the time, from old stuff I found in the dump that was the
> > > envy of most of my friends. Ive enjoyed doing it ever since.
>
> > > Jimmie- Hide quoted text -
>

> > - Show quoted text -
>
> The computer aided design was a big help. I figured 16mH. I think I
> have something about that size. I have a 20mH choke at one amp that
> may work.
> What you think Grumpy.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

This is just way to cool. I took a 500watt Lambmda 15 volt switcher I had used to power a solidstate amp and wound another secondary on the transformer. I lost count of the numer of turns, maybe 100, but after filtering and rectifying im getting about 450 volts and it has been running since about 9:30 AM 3hrs putting out 150mA.

These transformers look a little wierd They seem to be two sepated coils fastened together on a frame. It looks like you could take the secondary coil off and replace it if you wanted to.
Grumpy , are you familar with this.

Jimmie

# 1562. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-11 17:39:32 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B3480C7133D72MDWN@194.177.96.78>
Source record: 4299

That's great news! You could easily buck regulate the +15
down for a filament supply as well.

I've seen transformers with seperate primary and secondary
windings. If a company is building s standard product line
with various outputs they'll sometimes do that. Although it
usually increases the leakage inductance so that's the down
side. Sometimes the output inductor and transformer can be
combined.

I hope this goes though. I keep getting error 441 so I sent
you an email regarding your last post.

jimmie68@gmail.com wrote in
news:22bd0d76-981f-4fce-bb3d-da3ac469afc2@r66g2000hsg.googlegroups.com:

> This is just way to cool. I took a 500watt Lambmda 15 volt switcher I
> had used to power a solidstate amp and wound another secondary on the
> transformer. I lost count of the numer of turns, maybe 100, but
> after filtering and rectifying im getting about 450 volts and it has
> been running since about 9:30 AM 3hrs putting out 150mA.
>
> These transformers look a little wierd They seem to be two sepated
> coils fastened together on a frame. It looks like you could take the
> secondary coil off and replace it if you wanted to.
> Grumpy , are you familar with this.
>
> Jimmie
>

# 1563. Re: Hellenedyne: a new type of regen-reflex radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-12 12:18:34 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <6fc112f2-646f-41af-9939-c237d3866967@y21g2000hsf.googlegroups.com>
Source record: 4300

On Oct 10, 1:15 am, just_r...@yahoo.com wrote:
> hi everyone:
>
> i designed a new type of regen-reflex radio called the Hellenedyne. it
> uses a single triode in cathode follower mode at RF and in grounded
> grid mode at AF. the tube i selected needs only 18 volts of plate. it
> can be used with low-impedance earbuds for good sound. output is high
> compared to an Armstrong regenerator. if you love single tube designs
> you must try this one! explaination and circuit are available at my
> website:
>
> http://home.comcast.net/~phils_radio_designs/index.htm
>
> regards,
> phil :)
>
> PS if you wish to contact me feel free to send an e-mail

Hey Dr. Phil

That's interesting, you state somewhere in that linked article that
over 70vdc is dangerous. I use throw away 35mm camera photo flash
units that run off of a AA cell and drop the voltage down to 75vdc. I
like to use the really old 1 and 3 volt directly heated cathode tubes,
like the 3v4 and 1u4 or the 1u5 has a diode in it.

My supply only requires 1 battery.

Thanks for the great article. And the great old technology.

73 OM

n8zu

# 1564. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-14 13:12:42 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <2094f061-9c07-488e-920f-c113d1b55152@r66g2000hsg.googlegroups.com>
Source record: 4201

Lots of great comments and ideas in this thread; thanks. Terry

# 1565. Re: Needed: Cinch 10 pin female socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-15 00:48:59 UTC
From: wa2rqy <rlucch2098@aol.com>
Message-ID: <3a784a24-cc17-49e4-a6be-08a77e84ca77@w24g2000prd.googlegroups.com>
Source record: 4202

On Sep 28, 5:06 pm, raypsi <RBorow...@gmail.com> wrote:
> On Sep 20, 10:49 pm, wa2rqy <rlucch2...@aol.com> wrote:
>
> > For my power supply which feeds my Gonset G-76.
> > Appears that the last owner either removed the plastic pin retainer or
> > it fell out.
> > Now, there is nothing to support these female pins from wobbling
> > around & connector from falling off with poor connections to boot.
>
> Well if you has the shell, any S-310 will work. It's all the same
> just
> the shell or the mounting is different
>
> I'd go wit the S-310-CCT
>
> 73 OM
>
> n8zu

Thanks to all that tried to help out.
I bought 2 females & now to put one on.
good news is that it now transmits, 60 watts AM & 70 watts out in CW
tune-up.
Now gotta get a decent antenna on it see how it "Hears"\
Tnx all.....
Rich WA2RQY

# 1566. Re: Adonis AM-802 Desk Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-15 01:03:21 UTC
From: wa2rqy <rlucch2098@aol.com>
Message-ID: <608a3cfb-9871-42ff-b008-06f72998d7b7@w1g2000prk.googlegroups.com>
Source record: 4203

On Oct 10, 11:31 am, Ken <k...@g3msw.demon.co.uk> wrote:
> an anyone help with a scematic for this, please?

All sortsa info & schematics here on a lot of Adonis Mike's except
your model.
Maybe its a model number which is same as another.
Different numbers for different export ares but same mike, never know!
I have the 308 model as new here so I was interested in your quest to
look around the WWW.
I found this, might be a lead>
http://homepage.ntlworld.com/rg4wpw/date.html

GL........
Rich WA2RQY

# 1567. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-15 10:27:06 UTC
From: jimmie68@gmail.com
Message-ID: <77c8af7e-92a3-497a-831b-aedc15f92085@z6g2000pre.googlegroups.com>
Source record: 4204

On Oct 11, 1:39 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> That's great news!  You could easily buck regulate the +15
> down for a filament supply as well.
>
> I've seen transformers with seperate primary and secondary
> windings.  If a company is building s standard product line
> with various outputs they'll sometimes do that.  Although it
> usually increases the leakage inductance so that's the down
> side.  Sometimes the output inductor and transformer can be
> combined.
>
> I hope this goes though.  I keep getting error 441 so I sent
> you an email regarding your last post.
>
> jimmi...@gmail.com wrote
innews:22bd0d76-981f-4fce-bb3d-da3ac469afc2@r66g2000hsg.googlegroups.com:
>
>
>
> > This is just way to cool. I took a 500watt Lambmda 15 volt switcher I
> > had used to power a solidstate amp and wound another secondary on the
> > transformer.  I lost  count of the numer of turns, maybe 100, but
> > after filtering and rectifying im getting about 450 volts and it has
> > been running since about 9:30 AM 3hrs putting out 150mA.
>
> > These transformers look a little wierd They seem to be two sepated
> > coils fastened together on a frame. It looks like you could take the
> > secondary coil off and replace it if you wanted to.
> > Grumpy , are you familar with this.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

Well, The transformer winding doesn separate the way I thoufgt they
did. there is a pretty good sized gap betwen them,1/8" and it seems
one is a choke. I was confused because I have a couple of old scrap
power supplies that are made as previously described. They appeared to
be the same so I made a very incorrect assumption.

Jimmie

# 1568. BDSM in BDSM mpeg

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-15 14:24:54 UTC
From: tyreemand@gmail.com
Message-ID: <20c82979-3d82-4393-9528-213833b26724@25g2000prz.googlegroups.com>
Source record: 4205
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

BDSM http://youtubeplayer.byethost9.com/jpeg/bdsm.html BDSM

# 1569. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-15 14:40:08 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <01a69e21-6f4f-472a-9865-0c8a1bdf55cf@i24g2000prf.googlegroups.com>
Source record: 4206

On Oct 10, 1:11 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> I try to stay away from dumpsters but if I see anything electrical
> or electronic in one it's neigh impossible. (Nay impossible?????)
>
.
Hi Grumpy: Nags me too!!!!!! (OK spot the pun?)

But got to go; to unload my pickup of a free load of firewood got yesterday (couldn't say no to a second free batch in a week)!

Gee there were two old SPS supplies lying there too; probably all soaking wet! I didn't even look at the old 14 inch TV lying there as well in the junk pile.

# 1570. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-16 00:13:51 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B38C3A1A21B92MDWN@194.177.96.78>
Source record: 4207

Wet... well, I wouldn't pass them up!

I've salvaged a few pieces of gear from floods.
My most cherished HP RF sweep generator came out
of the mighty Mississippi river flooding in the
early 90's. First I carefully brush off the gunk
while washing with tap water. Then I flush with
DI or distilled water dry with a fan. Finally flush
with anhydrous isopropanol and dry with gentle warming.
After that a bit of lubriplate on any switch detents
or gears as needed. I take some things out first for
special treatment, like meter movements.

The distilled water flushes off the stuff we worry
about, ionic contamination and the alcohol removes
the water. At least that's what I hope for.

I'm trying to reform and not drag so much junk home.
Sometimes I can even pass up junked hardware without
flinching. With technical books of any sort I'm not
having much success resisting though.

Mmm! Free firewood. Which reminds me, I need to fill the
wood shed yet. Oak wilt disease is killing my trees but
at least I'll be warm.

terry <tsanford@nf.sympatico.ca> wrote in news:01a69e21-6f4f-472a-9865-
0c8a1bdf55cf@i24g2000prf.googlegroups.com:

> .
> Hi Grumpy: Nags me too!!!!!! (OK spot the pun?)
>
> But got to go; to unload my pickup of a free load of firewood got
> yesterday (couldn't say no to a second free batch in a week)!
>
> Gee there were two old SPS supplies lying there too; probably all
> soaking wet! I didn't even look at the old 14 inch TV lying there as
> well in the junk pile.
>

# 1571. Re: Switching power supplies question.

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-16 14:45:45 UTC
From: jimmie68@gmail.com
Message-ID: <83670093-581e-4bb6-986b-6160c1e8a166@d45g2000hsc.googlegroups.com>
Source record: 4208

On Oct 15, 8:13 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Wet... well, I wouldn't pass them up!
>
> I've salvaged a few pieces of gear from floods.
> My most cherished HP RF sweep generator came out
> of the mighty Mississippi river flooding in the
> early 90's.  First I carefully brush off the gunk
> while washing with tap water.  Then I flush with
> DI or distilled water dry with a fan.  Finally flush
> with anhydrous isopropanol and dry with gentle warming.
> After that a bit of lubriplate on any switch detents
> or gears as needed.  I take some things out first for
> special treatment, like meter movements.
>
> The distilled water flushes off the stuff we worry
> about, ionic contamination and the alcohol removes
> the water.  At least that's what I hope for.
>
> I'm trying to reform and not drag so much junk home.
> Sometimes I can even pass up junked hardware without
> flinching.  With technical books of any sort I'm not
> having much success resisting though.
>
> Mmm! Free firewood.  Which reminds me, I need to fill the
> wood shed yet.  Oak wilt disease is killing my trees but
> at least I'll be warm.
>
> terry <tsanf...@nf.sympatico.ca> wrote in news:01a69e21-6f4f-472a-9865-
> 0c8a1bdf5...@i24g2000prf.googlegroups.com:
>
>
>
> > .
> > Hi Grumpy: Nags me too!!!!!! (OK spot the pun?)
>
> > But got to go; to unload my pickup of a free load of firewood got
> > yesterday (couldn't say no to a second free batch in a week)!
>
> > Gee there were two old SPS supplies lying there too; probably all
> > soaking wet! I didn't even look at the old 14 inch TV lying there as
> > well in the junk pile.- Hide quoted text -
>
> - Show quoted text -

About 6 years ago while hauling off some junk from my in-laws home near Jacksonsonville Fl some stuff caught my eye at the dump. There were 3 tektronics scopes, a singer communications monitor and an audio test set. All worked and some of the pieces had current calibratiton stickers. Up until then I had been grumbling alot about wasting days of my vaction time cleaning.

Jimmie

# 1572. ** FLEA at MIT ** Sunday October 19th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-17 09:19:36 UTC
From: w1gsl@mit.edu
Message-ID: <48f858a8$0$298$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 4209
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.info

This coming Sunday....
the season's last.... FLEA at MIT

**********
**********

Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

*** !!!! In our Traditional GARAGE and the adjacent lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

<FF>
********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday October 19th 2008
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held on Albany between Mass Ave and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening

for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776 (M-F 9-5)

********** $1 buyers discount with hard copy of this notice ************

<FF>

Mail the coupon below by the 5th to be a Prepaid Vendor.

FLEA at MIT 2008 Rates

SELLERS

To use your prepaid spaces the named vendor MUST be present.
Rates include one admission per space.

Advance $17 First space
$12 Additional Spaces
Must be received by the 10th of the month.

Gate Admission $20 First Space
$15 Additional Spaces
Admission is after the prepaid vendors.

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

cut and return
**********
FLEA at MIT 2008 Advance Space Application 7/08

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

**********
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
**********

## 1573. Looking for bondage webcam?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-17 11:11:42 UTC
From: tyreemand@gmail.com
Message-ID: <934c1f33-1a94-4163-9f2a-4499a8ef2c30@y29g2000hsf.googlegroups.com>
Source record: 4210
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

View explicit live Webcams, meet for amateur scenes!
http://puntyhouse.byethost11.com/altcam.htm

# 1574. IC-R2500 RS-232/Autotune communication standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-17 16:22:27 UTC
From: Fritze <fritzoid@gmail.com>
Message-ID: <c523949b-2e60-41ec-81e4-552af2babbb4@y29g2000hsf.googlegroups.com>
Source record: 4211

Hello.

I have a IC-R2500, and I'm trying to establish a link between the
radio and my computer.Does anyone know the standard that dictates the
RS-232 packets that are sent between the radio and the computer?

Also...I've seen that the most common approach is communicating over a
CT-17 cable ( 1/8 stereo to 9pin female serial ). Does anyone know
if this is connection is straight through, or is there some sort of
voltage shift?

Thanks
nathan-fritze@engineering.uiowa.edu

## 1575. Homebrewing a "Hazer" antenna tram system

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-17 19:11:55 UTC
From: Jim <nospam@nospam.com>
Message-ID: <rkohf4dve8i57jdmn3ooa194de452ltdil@4ax.com>
Source record: 4212

I was considering the purchase of a Hazer until I read the numerous down reveiws with quality, service, documentation and jamming incidents too numerous to mention.

Anyway, there was mention of plans out in the ham fraternity for homebrewing an improved reliable version, so was wondering if anyone could steer me in the right direction? I'm not too good at web searching.

73,

# 1576. Re: Homebrewing a "Hazer" antenna tram system

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-17 22:02:42 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <48f90b77$0$5461$9a6e19ea@unlimited.newshosting.com>
Source record: 4213

Jim wrote:
> I was considering the purchase of a Hazer until I read the numerous
> down reveiws with quality, service, documentation and jamming
> incidents too numerous to mention.
>
> Anyway, there was mention of plans out in the ham fraternity for
> homebrewing an improved reliable version, so was wondering if anyone
> could steer me in the right direction? I'm not too good at web
> searching.
>
> 73,
>
>
They had a second scheme that consisted of a frame that traveled up the
legs of one face of the tower on rails. I don't think they ever sold
any, but it looks like an alternative that could be homebrewed.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1577. Sale Tubes NOS

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-18 06:51:13 UTC
From: Vintage <radiovintage2000@yahoo.it>
Message-ID: <cacaa2d7-4a21-43da-a67d-2a3fc0aa51d6@y71g2000hsa.googlegroups.com>
Source record: 4214

J sell Vacuum Tube NOS new in Box , approximately 1000 pcs ,
Sell in stoch or single some examples ( 4x150 / 5933wa - 807 / 3B28 /
7403 / 2050 / 5852 Bendix )
Plase write directly to my e_mail radiovintage2000@yahoo.it
Tnx
73 Frank

# 1578. Re: Homebrewing a "Hazer" antenna tram system

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-18 11:22:08 UTC
From: jimmie68@gmail.com
Message-ID: <38b13dc8-773c-4879-aad4-65798d634427@g61g2000hsf.googlegroups.com>
Source record: 4215

On Oct 17, 6:02 pm, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
> Jim wrote:
> > I was considering the purchase of a Hazer until I read the numerous
> > down reveiws with quality, service, documentation and jamming
> > incidents too numerous to mention.
>
> > Anyway, there was mention of plans out in the ham fraternity for
> > homebrewing an improved reliable version, so was wondering if anyone
> > could steer me in the right direction?  I'm not too good at web
> > searching.
>
> > 73,
>
> They had a second scheme that consisted of a frame that traveled up the
>   legs of one face of the tower on rails. I don't think they ever sold
> any, but it looks like an alternative that could be homebrewed.
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"©
>
> "Treason doth never prosper: what's the reason?
> For if it prosper, none dare call it treason."
>
> "Follow The Money"  ;-P

I used to know some guys that built a few while serving as
full time techs for the national guard. They bought one and then
copied
it making improvements mostly in the form of better quality parts.
Fortunately for them that had access to some pretty decent equipment,
welders, lathes, drill presses, nearly unlimited parts resources. My
contribution to the project was designing a thrust bearing that would
survive a salt marsh environment. When I was asked for an idea on it I
had just overhauled a motorcycle clutch so I thought OK use the same
idea for the clutch but instead of using something that has a lot of
friction use something really slick between metal plates. This took
the form of three or four stainless steel plates separated by sheets
of Teflon. Its my understanding that these devices survived the next
eight years with zero maintenance there use terminated only because
they were no longer required.

Jimmie

# 1579. Re: Homebrewing a "Hazer" antenna tram system

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-18 16:50:27 UTC
From: Jim <nospam@nospam.com>
Message-ID: <v42kf49m2sk5lgla8su7ep3a2hemugdaci@4ax.com>
Source record: 4216

Hello Joe;

Thanks for the tip, I do remember the rail system now that you mention it. It seems a more doable project, less complicated and would make positive contact with the rails rather than haphazard like mentioned in all the reviews and user comments.

On Fri, 17 Oct 2008 18:02:42 -0400, RFI-EMI-GUY <Rhyolite@NETTALLY.COM> wrote:

>Jim wrote:
>> I was considering the purchase of a Hazer until I read the numerous
>> down reveiws with quality, service, documentation and jamming
>> incidents too numerous to mention.
>>
>> Anyway, there was mention of plans out in the ham fraternity for
>> homebrewing an improved reliable version, so was wondering if anyone
>> could steer me in the right direction? I'm not too good at web
>> searching.
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>>
>>
>They had a second scheme that consisted of a frame that traveled up the
> legs of one face of the tower on rails. I don't think they ever sold
>any, but it looks like an alternative that could be homebrewed.

# 1580. Re: Homebrewing a "Hazer" antenna tram system

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-18 18:20:23 UTC
From: jimmie68@gmail.com
Message-ID: <97635ff5-eb6e-412a-88dd-b86228a8510a@m36g2000hse.googlegroups.com>
Source record: 4217

On Oct 18, 7:22 am, jimmi...@gmail.com wrote:
> On Oct 17, 6:02 pm, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
>
>
>
>
>
> > Jim wrote:
> > > I was considering the purchase of a Hazer until I read the numerous
> > > down reveiws with quality, service, documentation and jamming
> > > incidents too numerous to mention.
>
> > > Anyway, there was mention of plans out in the ham fraternity for
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> > > searching.
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> > They had a second scheme that consisted of a frame that traveled up the
> >   legs of one face of the tower on rails. I don't think they ever sold
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>
> > --
> > Joe Leikhim K4SAT
> > "The RFI-EMI-GUY"©
>
> > "Treason doth never prosper: what's the reason?
> > For if it prosper, none dare call it treason."
>
> > "Follow The Money"  ;-P
>
> I used to know  some guys that built  a few while serving as
> full time techs for the national guard. They bought one and then
> copied
> it making improvements mostly in the form of better quality parts.
> Fortunately for them that had access to some pretty decent equipment,
> welders, lathes, drill presses, nearly unlimited parts resources. My
> contribution to the project was designing a thrust bearing that would
> survive a salt marsh environment. When I was asked for an idea on it I
> had just overhauled a motorcycle clutch so I thought OK use the same
> idea for the clutch but instead of using something that has a lot of
> friction use something really slick between metal plates. This took
> the form of three or four stainless steel plates separated by sheets

> of Teflon. Its my understanding that these devices survived the next
> eight years with zero maintenance there use terminated only because
> they were no longer required.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

One of the thoughts I have had on building a Hazer is to slide a piece of 45G tower section over my 25G tower. I guess I will have to buy a short tower section to see if this is plausable. Im sure guides and roller additions will be required but this may be a good place to start a design. This is something I will probably try at my next home as for now am I still able to climb.

Jimmie

# 1581. Scandalous video reason Divorce Madonna and Ricchi

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-21 11:11:11 UTC
From: tyreemand@gmail.com
Message-ID: <f33c5746-281a-4269-9137-c2ddf7695dd4@2g2000hsn.googlegroups.com>
Source record: 4218
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://www.madonascandal.byethost31.com Madonna page featuring
exclusive Madonna videos, Madonna photos, and Madonna news,Madonna
videos, Madonna news, Madonna photos, Madonna videos, Madonna gossip.
Scandalous video reason end-marriage Madonna and Ricchi

# 1582. McCain is a fraud just like his campaign

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-21 22:25:37 UTC
From: legalmind <tedlacosta@msn.com>
Message-ID: <a55a10eb-e5a1-428e-aa50-abe07b0c2264@b31g2000prf.googlegroups.com>
Source record: 4219

However, John McCain's actual behavior from October to December 1967 is quite different from the Navy's version of events.

On October 27, 1967, four days after being shot down, McCain called for a North Vietnamese guard. He told the officer, "O.K., I'll give you military information if you will take me to the hospital." -U.S. News and World Report, May 14, 1973 article written by former POW John
McCain

McCain was taken to Gai Lam military hospital. (U.S. government documents) "Demands for military information were accompanied by threats to terminate my medical treatment if I [McCain] did not cooperate. Eventually, I gave them my ship's name and squadron number,
and confirmed that my target had been the power plant." Page 193-194, Faith of My Fathers by John McCain

On Nov. 9, 1967, Hanoi press began quoting the seriously injured McCain giving specific military information.

One report dated read, "To a question of the correspondent, McCain answered: 'My assignment to the Oriskany, I told myself, was due to serious losses in pilots, which were sustained by this aircraft carrier (due to its raids on the North Vietnam territory - VNA) and which necessitated replacements.

"'From 10 to 12 pilots were transferred like me from the Forrestal to the Oriskany.

"'Before I was shot down, we had made several sorties. Altogether, I made about 23 flights over North Vietnam.'"

In that report, McCain was quoted describing the number of aircraft in
his flight, information about rescue ships, and the order of which his
attack was supposed to take place.

Through the Freedom of Information Act, the U.S. Veteran Dispatch acquired a declassified Department of Defense (DOD) transcript of an interview prominent French television reporter Francois Chalais had with McCain.

Chalais told of his private interview with POW McCain in a series titled Life in Hanoi, which was aired in Europe. In the series, Chalais said his meeting with McCain was "a meeting which will leave

its mark on my life."

"My meeting with John Sidney McCain was certainly one of those meetings which will affect me most profoundly for the rest of my life.
I had asked the North Vietnamese authorities to allow me to personally
interrogate an American prisoner. They authorized me to do so.

"When night fell, they took me---without any precautions or mystery--to a hospital near the Gia Lam airport reserved for the military. (passage omitted) The officer who receives me begins: I ask you not to
ask any questions of political nature. If this man replies in a way unfavorable to us, they will not hesitate to speak of 'brainwashing' and conclude that we threatened him.

"'This John Sidney McCain is not an ordinary prisoner. His father is none other than Admiral Edmond John McCain, commander in chief of U.S.
naval forces in Europe. (passage omitted)'"

". . . Many visitors came to talk to me [John McCain]. Not all of it was for interrogation. Once a famous North Vietnamese writer-an old man with a Ho Chi Minh beard-came to my room, wanting to know all about Ernest Hemingway . . . Others came to find out about life in the
United States.

"They figured because my father had such high military rank that I was
of the royalty or governing circle . . . One of the men who came to see me, whose picture I recognized later, was Gen. Vo Nguyen Giap, the
hero of Dienbienphu." U.S. News and World Report, May 14, 1973 article
written by former POW John McCain

December 1967, Vietnamese doctors operate (early December) on McCain's
Leg. Later that month, six weeks after he was shot down, McCain was taken from the hospital and delivered to Room No. 11 of "The Plantation" into the hands of two other U.S. POWs, Air Force majors George "Bud" Day and Norris Overly. They helped further nurse him along until he was eventually able to walk by himself. --Faith of My Fathers by John McCain

Read retired Army Col. David Hackworth's opinion of Sen. McCain's medals.

STAY TUNED, MORE OF MCCAIN'S CITATIONS WILL BE POSTED HERE SOON

Ted Sampley
publisher

## 1583. hp410C

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-22 18:14:20 UTC
From: jimmie68@gmail.com
Message-ID: <19cfd5de-071b-4950-8506-16d17cf31224@u57g2000hsf.googlegroups.com>
Source record: 4220

The EA53 detector in my HP410C finally went bad. I was hoping someone knew where I could find one at a cheap price or maybe replacement circuit. The last time it went bad I paid over $100 to replace it and it still looks like thats about what they go for now. I only occasioally use it for work over 150Mhz so if a less expensive detector or probe could be had I would be interested even if it was frequency limited compared to the 410.

Thanks much

Jimmie

# 1584. Re: hp410C

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-22 20:11:44 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <4OLLk.344948$TT4.318665@attbi_s22>
Source record: 4221

<jimmie68@gmail.com> wrote in message
news:19cfd5de-071b-4950-8506-16d17cf31224@u57g2000hsf.googlegroups.com...
> The EA53 detector in my HP410C finally went bad. I was hoping someone
> knew where I could find one at a cheap price or maybe replacement
> circuit. The last time it went bad I paid over $100 to replace it and
> it still looks like thats about what they go for now. I only
> occasioally use it for work over 150Mhz so if a less expensive
> detector or probe could be had I would be interested even if it was
> frequency limited compared to the 410.
>
> Thanks much
>
> Jimmie

Google KA7EXM. Good to better than 500 MHz.
W4ZCB
>

# 1585. BDSM HARDCORE 1 Tb movi

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-23 13:23:23 UTC
From: tyreemand@gmail.com
Message-ID: <2a306d75-2c7c-444f-9955-00dd69e400a4@y71g2000hsa.googlegroups.com>
Source record: 4222
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://traxanki.byethost15.com/bdsm.htm BDSM http://traxanki.byethost15.com/hardcore.htm HARDCORE http://s0x0.blogspot.com
http://groups.google.com/group/porntube-best-movies-collection

# 1586. 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 09:14:24 UTC
From: dgleeson422111 <dgleeson3@eircom.net>
Message-ID: <159dee31-5436-4f46-ae9d-48214eec09ca@k37g2000hsf.googlegroups.com>
Source record: 4223
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

Hello All

We have a propagation issue that is confusing us. We have two 868MHz modules on test, each capable of 500mW transmission.

We are testing to find the range of communication. We are testing them as follows. One remains in our office while the other is taken to the street outside. we are communicating charecter strings such as "Im at the lamp post number 1" etc. There is somebody at each end sending text strings in a continuous conversation. There is no protocol, error checking or error recovery.

What we have repetadly found is that the radio in the office can receive long after the radio in the street has stopped receiving. (The person with the radio in the street is moving away from the office.)

The radios are the same and the power supplies to the radios are the same. Indeed switching the radios gives the same effect.

The propagation paths between the two radios are the same in terms of distance. However the radio signal transmitted from the office travels through walls first before then traveling through open space. Its the opposite for the radio in the street, firstly traveling through space and then through the walls in the office.

We did think we had identified an interfeering source in one direction (when moving away from the office) so we started moving in the opposite direction. We found exactly the same effect.

Are we getting interfeerance from GSM, ISM or Paging?

As far as GSM bands go in Europe 890–915 MHz OR 1710–1785 MHz So these shouldnt be our problem.

ISM is where we intend to operate and the greatest band occupancy should be 10%. So we should get communication even though we would get some interfeerance.

Paging - well this has very much gone out of fashion in Europe. But even if it was the cause then wouldnt it be intermittant communication. We have a constant problem.

Can anyone shed light on this phenomonon? Is it an issue of wireless propagation that Im not familiar with or is it Interfeerance?

Best regards, and thanks for any input.

Denis

---
http://www.CentronSolutions.com

# 1587. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 09:42:10 UTC
From: HighlandObserver@gmail.com
Message-ID: <6363g41rbjccfmgi365k9844gir9h1fm5m@4ax.com>
Source record: 4224

On Fri, 24 Oct 2008 02:14:24 -0700 (PDT), dgleeson422111
<dgleeson3@eircom.net> wrote:

>Can anyone shed light on this phenomonon? Is it an issue of wireless
>propagation that Im not familiar with or is it Interfeerance?

Nope a question of height

# 1588. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 10:08:58 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <b9hMk.22079$YN3.15532@newsfe12.iad>
Source record: 4225

<HighlandObserver@gmail.com> wrote in message
news:6363g41rbjccfmgi365k9844gir9h1fm5m@4ax.com...
> On Fri, 24 Oct 2008 02:14:24 -0700 (PDT), dgleeson422111
> <dgleeson3@eircom.net> wrote:
>
>>Can anyone shed light on this phenomonon? Is it an issue of wireless
>>propagation that Im not familiar with or is it Interfeerance?
>
> Nope a question of height

Shouldn't the path be reciprical?

# 1589. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 10:57:40 UTC
From: oopere <me@somewhere.net>
Message-ID: <gds9n4$2vl$1@defalla.upc.es>
Source record: 4226
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.
>
> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
>
> The radios are the same and the power supplies to the radios are the
> same. Indeed switching the radios gives the same effect.
>
> The propagation paths between the two radios are the same in terms of
> distance. However the radio signal transmitted from the office travels
> through walls first before then traveling through open space. Its the
> opposite for the radio in the street, firstly traveling through space
> and then through the walls in the office.
>
> We did think we had identified an interfeering source in one direction
> (when moving away from the office) so we started moving in the
> opposite direction. We found exactly the same effect.
>
> Are we getting interfeerance from GSM, ISM or Paging?
>
> As far as GSM bands go in Europe 890ï¿½915 MHz OR 1710ï¿½1785 MHz So these
> shouldnt be our problem.
>
> ISM is where we intend to operate and the greatest band occupancy
> should be 10%. So we should get communication even though we would get
> some interfeerance.
>
> Paging - well this has very much gone out of fashion in Europe. But
> even if it was the cause then wouldnt it be intermittant
> communication. We have a constant problem.
>

> Can anyone shed light on this phenomonon? Is it an issue of wireless
> propagation that Im not familiar with or is it Interfeerance?
>
> Best regards, and thanks for any input.
>
> Denis
> _____________________
> http://www.CentronSolutions.com

You may experience receiver desensitization from a strong out-of-band interferer which is not penetrating well into your office and hence not interferring there.

Pere

# 1590. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 11:38:05 UTC
From: dgleeson422111 <dgleeson3@eircom.net>
Message-ID: <898752cd-4cd6-4e2e-8d25-5f57f14e0067@h60g2000hsg.googlegroups.com>
Source record: 4227
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

Hi Guys

Thanks for your input on this.

The idea of height being a problem is interesting. The radio in the
office is on the 1st floor (i.e above the ground by one floor).

If the antenna were at the same height would the problem go away?

We will test and see

On Oct 24, 11:57 am, oopere <m...@somewhere.net> wrote:
> dgleeson422111 wrote:
> > Hello All
>
> > We have a propagation issue that is confusing us. We have two 868MHz
> > modules on test, each capable of 500mW transmission.
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> > We are testing to find the range of communication. We are testing them
> > as follows. One remains in our office while the other is taken to the
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> > Paging - well this has very much gone out of fashion in Europe. But
> > even if it was the cause then wouldnt it be intermittant
> > communication. We have a constant problem.
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> > Can anyone shed light on this phenomonon? Is it an issue of wireless
> > propagation that Im not familiar with or is it Interfeerance?
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> > Best regards, and thanks for any input.
>
> > Denis
> > _____________________
> >http://www.CentronSolutions.com
>
> You may experience receiver desensitization from a strong out-of-band
> interferer which is not penetrating well into your office and hence not
> interferring there.
>
> Pere- Hide quoted text -
>
> - Show quoted text -

# 1591. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 11:49:13 UTC
From: osr@uakron.edu
Message-ID: <ee49a64c-dca6-4389-8f6c-c41d2c9eca64@l42g2000hsc.googlegroups.com>
Source record: 4228
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

higher antennas = longer range. Thats your issue.
Also lack of error correction, poor antenna pattern to meet the low
power regulations, and a less then robust protocol, ie your probably
using some form of on/off modulation where the receiver does not have
a continious wave signal to locl on and track. Try sending a preamble
character that is 10101010 a few times, assuming your receiver is
sophisticated enough to use AGC. This sets the DC level in the
discriminator more accurately and reduces errors.

your using a radio with intentionally designed in limited range to
allow reuse of the frquency.

Steve

# 1592. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 12:02:24 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <T5CdncnwyZfOJJzUnZ2dnUVZ_obinZ2d@giganews.com>
Source record: 4229
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

"dgleeson422111" <dgleeson3@eircom.net> wrote in message
news:159dee31-5436-4f46-ae9d-48214eec09ca@k37g2000hsf.googlegroups.com...

What we have repetadly found is that the radio in the office can
receive long after the radio in the street has stopped receiving. (The
person with the radio in the street is moving away from the office.)

The radios are the same and the power supplies to the radios are the
same. Indeed switching the radios gives the same effect.

Is your office in a concrete building? Or one with any steel reinforcement
or steel or aluminum studs? If so, it could well be that there is a
standing wave issue, so that a portion of your transmitted signal is being
reflected back, and so not making it to the receiver. This would not
necessarily affect the reception on the radio in the office from the outside
radio.

# 1593. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 12:03:57 UTC
From: Anthony Fremont <nobody@noplace.net>
Message-ID: <i82dnTmmXOMzJJzUnZ2dnUVZ_t7inZ2d@supernews.com>
Source record: 4230
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
\> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
>
> The radios are the same and the power supplies to the radios are the
> same. Indeed switching the radios gives the same effect.

The radio outside is likely being desensitized by some other signal.

# 1594. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 12:12:33 UTC
From: 1hogrider <nitespark@cox.net>
Message-ID: <RYiMk.4801$I8.1980@newsfe03.iad>
Source record: 4231
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.
>
> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
>

I see you have other responses. One test that would establish that is environmental (adjacent signal, receiver desense, etc), if BOTH units could be moved to a relative RF free environment such as a rural setting and then test the range.

If this eliminates the problem, then its probably time to break out a spectrum analyzer and take a look at what is around your operating frequency.

Andy

## 1595. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 12:14:04 UTC
From: Jon Slaughter <Jon_Slaughter@Hotmail.com>
Message-ID: <BYiMk.3157$Ei5.2077@flpi143.ffdc.sbc.com>
Source record: 4232
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

It's because the paths are not the same. Think of a silvered mirror. It can transmit light much easier in one direction than the other. Take both outside and see if it has the same problem. (extremely doubtful because the path's is virtually identical)

# 1596. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 12:29:50 UTC
From: EE123 <onyx49@juno.com>
Message-ID: <b033a457-e210-4c0e-b0ba-8a5d5cf8abf3@p49g2000hsd.googlegroups.com>
Source record: 4233
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

On Oct 24, 8:14 am, "Jon Slaughter" <Jon_Slaugh...@Hotmail.com> wrote:
> It's because the paths are not the same. Think of a silvered mirror. It can
> transmit light much easier in one direction than the other. Take both
> outside and see if it has the same problem. (extremely doubtful because the
> path's is virtually identical)

Did you design the receive software?
Or did buy the receiver "off the shelve"?

Perhaps there is a problem
with the receivers and how they are
receiving the data.

# 1597. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 12:53:04 UTC
From: Jon Slaughter <Jon_Slaughter@Hotmail.com>
Message-ID: <SyjMk.1284$%11.842@flpi144.ffdc.sbc.com>
Source record: 4234
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

"EE123" <onyx49@juno.com> wrote in message
news:b033a457-e210-4c0e-b0ba-8a5d5cf8abf3@p49g2000hsd.googlegroups.com...
On Oct 24, 8:14 am, "Jon Slaughter" <Jon_Slaugh...@Hotmail.com> wrote:
> It's because the paths are not the same. Think of a silvered mirror. It
> can
> transmit light much easier in one direction than the other. Take both
> outside and see if it has the same problem. (extremely doubtful because
> the
> path's is virtually identical)

Did you design the receive software?
Or did buy the receiver "off the shelve"?

Perhaps there is a problem
with the receivers and how they are
receiving the data.

um, did you read his message? He said that it was independent of the
receiver because they exchanged them and the same problem. i.e., it helps to
read the original post.

# 1598. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 13:12:50 UTC
From: Dave <dave@dave.dave>
Message-ID: <mRjMk.17671$bK.16944@newsfe04.iad>
Source record: 4235
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.

Do you have a license?

# 1599. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 16:00:23 UTC
From: JB <nospam@goofball.net>
Message-ID: <rimMk.44$Jv2.32@nwrddc01.gnilink.net>
Source record: 4236
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

>What we have repetadly found is that the radio in the office can
receive long after the radio in the street has stopped receiving. (The
person with the radio in the street is moving away from the office.)

You don't say if you are using the same antenna on both ends, but the environment is very different at each end. Consider that Transmitting is about putting signal into an area, while receiving is about capturing the signals in near field of the antenna, then discerning the intellegence. You would have to analyze the output to be sure, but it may be localized reflections, shading or noise at the street level. Because of this it is so difficult to quantify range. There is equipment and software specifically designed to do what you are trying to do but it is expensive. The result is highly detailed signal strength graphic output overlaid on 3d mapping for each fixed site at various frequencies. Most commercial antenna sites have gone to great expense to generate those maps in order to show what their tower does because it is very different for each location.

# 1600. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 16:19:03 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <frs3g4ltnlun2ne5str6veq10rr1t1nmcr@4ax.com>
Source record: 4237
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

On Fri, 24 Oct 2008 02:14:24 -0700 (PDT), dgleeson422111
<dgleeson3@eircom.net> wrote:

>What we have repetadly found is that the radio in the office can
>receive long after the radio in the street has stopped receiving. (The
>person with the radio in the street is moving away from the office.)

Is the moving station manually portable or is it mounted on a vehicle?

If the moving operator is bored and continuously talks on a GSM phone
or if the (vehicle) generates some other kind of interference, this
would reduce the SNR at the moving station.

>The radios are the same and the power supplies to the radios are the
>same. Indeed switching the radios gives the same effect.
>
>The propagation paths between the two radios are the same in terms of
>distance. However the radio signal transmitted from the office travels
>through walls first before then traveling through open space. Its the
>opposite for the radio in the street, firstly traveling through space
>and then through the walls in the office.

Does the transmitter have some kind of SWR protection ?

If the Tx antenna is close to the wall, it might detune the antenna,
increasing the SWR and the SWR protection drops the transmitter power.

Paul OH3LWR

# 1601. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 17:07:19 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <YcnMk.50803$XT1.43666@bignews5.bellsouth.net>
Source record: 4238
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

"oopere" <me@somewhere.net> wrote in message
news:gds9n4$2vl$1@defalla.upc.es...
>
>
> dgleeson422111 wrote:
>> Hello All
>>
>> We have a propagation issue that is confusing us. We have two 868MHz
>> modules on test, each capable of 500mW transmission.
>>
>> We are testing to find the range of communication. We are testing them
>> as follows. One remains in our office while the other is taken to the
>> street outside. we are communicating charecter strings such as "Im at
>> the lamp post number 1" etc. There is somebody at each end sending
>> text strings in a continuous conversation. There is no protocol, error
>> checking or error recovery.
>>
>> What we have repetadly found is that the radio in the office can
>> receive long after the radio in the street has stopped receiving. (The
>> person with the radio in the street is moving away from the office.)
>>
>> The radios are the same and the power supplies to the radios are the
>> same. Indeed switching the radios gives the same effect.
>>
>> The propagation paths between the two radios are the same in terms of
>> distance. However the radio signal transmitted from the office travels
>> through walls first before then traveling through open space. Its the
>> opposite for the radio in the street, firstly traveling through space
>> and then through the walls in the office.
>>
>> We did think we had identified an interfeering source in one direction
>> (when moving away from the office) so we started moving in the
>> opposite direction. We found exactly the same effect.
>>
>> Are we getting interfeerance from GSM, ISM or Paging?
>>
>> As far as GSM bands go in Europe 890 915 MHz OR 1710 1785 MHz So these
>> shouldnt be our problem.
>>
>> ISM is where we intend to operate and the greatest band occupancy
>> should be 10%. So we should get communication even though we would get
>> some interfeerance.

>>
>> Paging - well this has very much gone out of fashion in Europe. But
>> even if it was the cause then wouldnt it be intermittant
>> communication. We have a constant problem.
>>
>> Can anyone shed light on this phenomonon? Is it an issue of wireless
>> propagation that Im not familiar with or is it Interfeerance?
>>
>> Best regards, and thanks for any input.
>>
>> Denis
>> _____
>> http://www.CentronSolutions.com
>
> You may experience receiver desensitization from a strong out-of-band
> interferer which is not penetrating well into your office and hence not
> interferring there.
>
> Pere

Such as traffic light electronics.

Without error correction protocols being employed, you are also at the mercy
of multipath interference. You're QRMing your own signal. 8>)

Ed, NM2K

# 1602. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 17:26:57 UTC
From: "Helmut Wabnig"
Message-ID: <m714g4dcib22h58lk2dnq5dlap15ru9qon@4ax.com>
Source record: 4239
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

On Fri, 24 Oct 2008 02:14:24 -0700 (PDT), dgleeson422111
<dgleeson3@eircom.net> wrote:

>
>What we have repetadly found is that the radio in the office can
>receive long after the radio in the street has stopped receiving. (The
>person with the radio in the street is moving away from the office.)
>

Polarization could be a factor.
Reflections change the polarization appr. 90 degrees.

Rotate the antennas left & right to find out.

(you did not mention your type of antennas)

w.

# 1603. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 17:29:55 UTC
From: "Helmut Wabnig"
Message-ID: <le14g4hi8u896c9l9lk0qnb2i7b2jdibr4@4ax.com>
Source record: 4240
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

On Fri, 24 Oct 2008 02:14:24 -0700 (PDT), dgleeson422111
<dgleeson3@eircom.net> wrote:

>
>What we have repetadly found is that the radio in the office can
>receive long after the radio in the street has stopped receiving. (The
>person with the radio in the street is moving away from the office.)
>

This is typical for groundplane antennas.
They radiate upwards.

Polarization could be a factor.
Reflections change the polarization appr. 90 degrees.

Rotate the antennas left & right to find out.

(you did not mention your type of antennas)

w.

# 1604. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 17:44:09 UTC
From: Mark <makolber@yahoo.com>
Message-ID: <89e3cfad-c877-4be6-8eca-53993e23a9e9@h2g2000hsg.googlegroups.com>
Source record: 4242
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment
Body handling: HTML body converted to readable text

On Oct 24, 2:00 pm, "Paul Hovnanian P.E." wrote:
> dgleeson422111 wrote:
>
> > Hello All
>
> > We have a propagation issue that is confusing us. We have two 868MHz
> > modules on test, each capable of 500mW transmission.
>
> > We are testing to find the range of communication. We are testing them
> > as follows. One remains in our office while the other is taken to the
> > street outside. we are communicating charecter strings such as "Im at
> > the lamp post number 1" etc. There is somebody at each end sending
> > text strings in a continuous conversation. There is no protocol, error
> > checking or error recovery.
>
> > What we have repetadly found is that the radio in the office can
> > receive long after the radio in the street has stopped receiving. (The
> > person with the radio in the street is moving away from the office.)
>
> > The radios are the same and the power supplies to the radios are the
> > same. Indeed switching the radios gives the same effect.
>
> > The propagation paths between the two radios are the same in terms of
> > distance. However the radio signal transmitted from the office travels
> > through walls first before then traveling through open space. Its the
> > opposite for the radio in the street, firstly traveling through space
> > and then through the walls in the office.
>
> > We did think we had identified an interfeering source in one direction
> > (when moving away from the office) so we started moving in the
> > opposite direction. We found exactly the same effect.
>
> > Are we getting interfeerance from GSM, ISM or Paging?
>
> > As far as GSM bands go in Europe 890-915 MHz OR 1710-1785 MHz So these
> > shouldnt be our problem.
>
> > ISM is where we intend to operate and the greatest band occupancy
> > should be 10%. So we should get communication even though we would get
> > some interfeerance.
>
> > Paging - well this has very much gone out of fashion in Europe. But

> > even if it was the cause then wouldnt it be intermittant
> > communication. We have a constant problem.
>
> > Can anyone shed light on this phenomonon? Is it an issue of wireless
> > propagation that Im not familiar with or is it Interfeerance?
>
> > Best regards, and thanks for any input.
>
> > Denis
> > _____
> >http://www.CentronSolutions.com
>
> Have you tried relocating the office transceiver? There might be
> something about the office environment that is interfering with its
> transmission.
>
> --
> Paul Hovnanian mailto:P...@Hovnanian.com
> ------------------------------------------------------------------
> A mathematician is a machine for converting coffee into theorems.- Hide quoted text -
>
> - Show quoted text -

wow so many of these replies are wrong..

in almost all cases, RF path losses are RECIPROCAL.

(even a 1/2 silvered mirror is reciprocal to light)

As some have said, the cause of your issue is probably interference to
the outside receiver.

Or maybe something about the indoor setup is causing the indoor Tx to
operate at lower power.

It is very unusual for RF path loss to be non-reciprocal.

Mark

# 1605. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 18:00:24 UTC
From: "Paul Hovnanian P.E." <paul@hovnanian.com>
Message-ID: <49020D38.B232C623@hovnanian.com>
Source record: 4241
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
>
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.
>
> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
>
> The radios are the same and the power supplies to the radios are the
> same. Indeed switching the radios gives the same effect.
>
> The propagation paths between the two radios are the same in terms of
> distance. However the radio signal transmitted from the office travels
> through walls first before then traveling through open space. Its the
> opposite for the radio in the street, firstly traveling through space
> and then through the walls in the office.
>
> We did think we had identified an interfeering source in one direction
> (when moving away from the office) so we started moving in the
> opposite direction. We found exactly the same effect.
>
> Are we getting interfeerance from GSM, ISM or Paging?
>
> As far as GSM bands go in Europe 890-915 MHz OR 1710-1785 MHz So these
> shouldnt be our problem.
>
> ISM is where we intend to operate and the greatest band occupancy
> should be 10%. So we should get communication even though we would get
> some interfeerance.
>
> Paging - well this has very much gone out of fashion in Europe. But
> even if it was the cause then wouldnt it be intermittant
> communication. We have a constant problem.

> 
> Can anyone shed light on this phenomonon? Is it an issue of wireless
> propagation that Im not familiar with or is it Interfeerance?
> 
> Best regards, and thanks for any input.
> 
> Denis
> _____________________
> http://www.CentronSolutions.com

Have you tried relocating the office transceiver? There might be
something about the office environment that is interfering with its
transmission.

--
Paul Hovnanian mailto:Paul@Hovnanian.com
---
A mathematician is a machine for converting coffee into theorems.

# 1606. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 18:19:17 UTC
From: "Paul Hovnanian P.E." <paul@hovnanian.com>
Message-ID: <490211A5.5AE4BB68@hovnanian.com>
Source record: 4243
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
>
> Hi Guys
>
> Thanks for your input on this.
>
> The idea of height being a problem is interesting. The radio in the
> office is on the 1st floor (i.e above the ground by one floor).
>
> If the antenna were at the same height would the problem go away?
>
> We will test and see

If I remember my antenna/propagation theory correctly, such a change should affect both the transmit and receive gains equally. That is to say, if moving the office antenna lower will reduce its transmit range, it will also reduce its receive range.

What you are looking for is something that is reducing the office end transmit power while leaving its receive sensitivity intact. Someone else suggested an SWR problem due to near field interference with the antenna.

--
Paul Hovnanian mailto:Paul@Hovnanian.com
---
Don't anthropomorphize computers. They hate that.

# 1607. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 18:22:05 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <49021242$0$4931$9a6e19ea@unlimited.newshosting.com>
Source record: 4244
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

Dave wrote:
> dgleeson422111 wrote:
>> Hello All
>>
>> We have a propagation issue that is confusing us. We have two 868MHz
>> modules on test, each capable of 500mW transmission.
>>
>> We are testing to find the range of communication. We are testing them
>> as follows. One remains in our office while the other is taken to the
>> street outside. we are communicating charecter strings such as "Im at
>> the lamp post number 1" etc. There is somebody at each end sending
>> text strings in a continuous conversation. There is no protocol, error
>> checking or error recovery.
>
> Do you have a license?

Not required in EU for 868 MHz

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1608. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 18:24:25 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <490212D9.7020605@NETTALLY.COM>
Source record: 4245
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

Anthony Fremont wrote:
> dgleeson422111 wrote:
> \> What we have repetadly found is that the radio in the office can
>> receive long after the radio in the street has stopped receiving. (The
>> person with the radio in the street is moving away from the office.)
>>
>> The radios are the same and the power supplies to the radios are the
>> same. Indeed switching the radios gives the same effect.
>
> The radio outside is likely being desensitized by some other signal.
>
>

Most likely scenario.

Also make sure that in your design you are powering down the transmitter
fully in the receive mode. In some radios there can be a residual
carrier from the PLL causing self interference ar interference to other
nearby nodes.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1609. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 18:26:59 UTC
From: Anthony Fremont <nobody@noplace.net>
Message-ID: <tt2dnUrzaMnojp_UnZ2dnUVZ_uWdnZ2d@supernews.com>
Source record: 4246
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment
Body handling: HTML body converted to readable text

Mark wrote:
> On Oct 24, 2:00 pm, "Paul Hovnanian P.E." wrote:

> wow so many of these replies are wrong..

This is normal when antenna "theory" comes up.

> in almost all cases, RF path losses are RECIPROCAL.

I agree, including the antenna gains (meaning that the antennas at each end
don't have to match).

> (even a 1/2 silvered mirror is reciprocal to light)

Well that guy is usually on a differet page.

> As some have said, the cause of your issue is probably interference to
> the outside receiver.

That's what I think is the most likely cause. The guy outside probably has
his Nextel phone with him. ;-)

> Or maybe something about the indoor setup is causing the indoor Tx to
> operate at lower power.

I suppose that's possible too. The OP should make sure the power supplies
are equivalent (meaning that the output power would suffer more than the
receiver gain with a drooping supply). So check the indoor supply.

> It is very unusual for RF path loss to be non-reciprocal.

# 1610. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 20:25:58 UTC
From: jimmie68@gmail.com
Message-ID: <86256efd-9b07-412c-ac39-c886d2b42ec6@m74g2000hsh.googlegroups.com>
Source record: 4247
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment
Body handling: HTML body converted to readable text

On Oct 24, 2:26 pm, "Anthony Fremont" wrote:
> Mark wrote:
> > On Oct 24, 2:00 pm, "Paul Hovnanian P.E." wrote:
> > > wow so many of these replies are wrong..
>
> This is normal when antenna "theory" comes up.
>
> > in almost all cases, RF path losses are RECIPROCAL.
>
> I agree, including the antenna gains (meaning that the antennas at each end
> don't have to match).
>
> > (even a 1/2 silvered mirror is reciprocal to light)
>
> Well that guy is usually on a differet page.
>
> > As some have said, the cause of your issue is probably interference to
> > the outside receiver.
>
> That's what I think is the most likely cause. The guy outside probably has
> his Nextel phone with him. ;-)
>
> > Or maybe something about the indoor setup is causing the indoor Tx to
> > operate at lower power.
>
> I suppose that's possible too. The OP should make sure the power supplies
> are equivalent (meaning that the output power would suffer more than the
> receiver gain with a drooping supply). So check the indoor supply.
>
>
>
> > It is very unusual for RF path loss to be non-reciprocal.- Hide quoted text -
>
> - Show quoted text -

It is assumed that the path to and from the office should be inferior
to the line of sight path out on the street. This may or may not be
true. The building may actually be offering gain in certain
directions. I would start by seeing if the same condition existed at
many more locations. If it does then other ideas need to be examined,
I would start by examining the RF environment outside the building.

Jimmie

# 1611. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 20:37:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4pb4g41och7e9d1ggp2cjhdv2m9lhk8r72@4ax.com>
Source record: 4248
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

On Fri, 24 Oct 2008 02:14:24 -0700 (PDT), dgleeson422111
<dgleeson3@eircom.net> wrote:

>Hello All
>
>We have a propagation issue that is confusing us. We have two 868MHz
>modules on test, each capable of 500mW transmission.

Hi Denis,

That is a lot of power for a problem of losing contact in the space of
blocks.

>What we have repetadly found is that the radio in the office can
>receive long after the radio in the street has stopped receiving. (The
>person with the radio in the street is moving away from the office.)
>
>The radios are the same and the power supplies to the radios are the
>same. Indeed switching the radios gives the same effect.
>
>The propagation paths between the two radios are the same in terms of
>distance. However the radio signal transmitted from the office travels
>through walls first before then traveling through open space. Its the
>opposite for the radio in the street, firstly traveling through space
>and then through the walls in the office.

A very good description of the symptoms and relations.

>We did think we had identified an interfeering source in one direction
>(when moving away from the office) so we started moving in the
>opposite direction. We found exactly the same effect.

A good test for reducing variables. If you identified an
interference, I would presume you could do that again in the other
direction.

>Are we getting interfeerance from GSM, ISM or Paging?

Only if the remote set was nearer to an undiscovered interferer. You
seemed to have resolved that once, and you should be able to detect
the similar occurrence again.

>As far as GSM bands go in Europe 890ï¿½915 MHz OR 1710ï¿½1785 MHz So these
>shouldnt be our problem.

This is a flaw in the logic. Your frequency of operation is very
close to these bands - unless your sets have been designed with

elaborate front end tuning (which seems unlikely).

>Can anyone shed light on this phenomonon? Is it an issue of wireless
>propagation that Im not familiar with or is it Interfeerance?

One component not discussed is the remote set's proximity to the operator. The operator could disturb the local field (aka shield). Going beyond is the effect of a Fresnel Zone, but your descriptions describe a complete black-out. To test this requires you to go further away to see if you pick up the signal again. This is a long shot, however, as the effect would be distinct within the space of a meter or so. For mobile operation, the Fresnel Zone creates what is called "Picket Fencing" as the signal comes and goes quickly with distance traveled.

Perhaps it is the proximity of a Pub, and your operator stopped in for a Guinness.

73's
Richard Clark, KB7QHC

# 1612. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 21:12:43 UTC
From: Joerg <notthisjoergsch@removethispacbell.net>
Message-ID: <iTqMk.5863$be.5632@nlpi061.nbdc.sbc.com>
Source record: 4249
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.
>
> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
>
> The radios are the same and the power supplies to the radios are the
> same. Indeed switching the radios gives the same effect.
>
> The propagation paths between the two radios are the same in terms of
> distance. However the radio signal transmitted from the office travels
> through walls first before then traveling through open space. Its the
> opposite for the radio in the street, firstly traveling through space
> and then through the walls in the office.
>
> We did think we had identified an interfeering source in one direction
> (when moving away from the office) so we started moving in the
> opposite direction. We found exactly the same effect.
>
> Are we getting interfeerance from GSM, ISM or Paging?
>
> As far as GSM bands go in Europe 890ï¿½915 MHz OR 1710ï¿½1785 MHz So these
> shouldnt be our problem.
>
> ISM is where we intend to operate and the greatest band occupancy
> should be 10%. So we should get communication even though we would get
> some interfeerance.
>
> Paging - well this has very much gone out of fashion in Europe. But
> even if it was the cause then wouldnt it be intermittant
> communication. We have a constant problem.
>

> Can anyone shed light on this phenomonon? Is it an issue of wireless
> propagation that Im not familiar with or is it Interfeerance?
>
> Best regards, and thanks for any input.
>

I'll second Pere and Anthony. Strong out-of-band signals is what I found mostly in situations where path losses seemed strangely non-reciprocal.

Post a schematic. One possibility is that your receive input filter is wide open like a barn door and GSM swamps the receiver.

Another option if you have a spectrum analyzer: Hang a large near-field probe into a long cable, tape it to a broomstick and hold that out the window for a while. See what pops up on the screen. If this is in a city be prepared for some commotion among the pedestrians down there :-)

--
Regards, Joerg

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"gmail" domain blocked because of excessive spam.
Use another domain or send PM.

# 1613. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-24 23:13:43 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <562c8f9b-654e-4565-94db-28c275992da2@d10g2000pra.googlegroups.com>
Source record: 4250
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

Hey:

My crystal balls are saying:

Multipath where a reflected signal from the source
is being cancelled out in the zone sort of like
standing waves. It's like waves in a bath tub
they bounce of the sides and produce more inter-
ference waves, and so on. Or FM broadcast stations
signal in the big city with tall buildings, all of a sudden
the signal just goes puff while you're driving along down-
town.

I'd say gits your antenna near a window or put up an
outdoor antenna.

73 OM

n8zu

# 1614. BDSM HARDCORE 1 Tb movi

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-25 13:44:32 UTC
From: tyreemand@gmail.com
Message-ID: <1b878a33-4cd4-46af-9cc7-7a86b294ede4@x41g2000hsb.googlegroups.com>
Source record: 4101
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://traxanki.byethost15.com/bdsm.htm BDSM http://traxanki.byethost15.com/hardcore.htm HARDCORE http://s0x0.blogspot.com
http://groups.google.com/group/porntube-best-movies-collection

# 1615. Yaesu FP-301 sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-25 17:15:04 UTC
From: Vintage <radiovintage2000@yahoo.it>
Message-ID: <52932660-34e5-41f9-ad9a-182962f35301@x41g2000hsb.googlegroups.com>
Source record: 4102

I sell Power Supply Yaesu FP-301 in Good Condition , For Info please
write to me at Radiovintage2000@yahoo.it
Tnx Frank

# 1616. I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-25 17:25:23 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <ea79280c-6148-42a5-be23-33e848418174@n1g2000prb.googlegroups.com>
Source record: 4103

Hey all:

I tore down a transformer I got from ebay it was a Zenith TV power transformer from days gone by. Re wound it with 17AWG wire on the secondary and primary. It powers up my 4-1000A filament nicely with 7.25VAC from 120VAC mains. I used a penta-filar winding on the secondary. Shimmed the bobbin in the core window with some 1/8 thick virgin teflon. Epoxied the windings to the bobbin. This was a 240VA transformer and now is a 83watt buzzer / 157watt filament transformer.

So what is the cheapest I can gits away with sealing these laminations from buzzing, I used up all my epoxy sealing the windings.

73

n8zu

# 1617. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-25 21:15:44 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <m0MMk.5597$3w.704@newsfe19.iad>
Source record: 4104
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

"Mark" <makolber@yahoo.com> wrote in message news:89e3cfad-c877-4be6-8eca-
wow so many of these replies are wrong..

in almost all cases, RF path losses are RECIPROCAL.

( It is very unusual for RF path loss to be non-reciprocal.

Mark

I agree. But, one thing that should be proven is that both modules
are working as intended. The one being used for the remote
application *could* be defective. Swap modules and see if the
receiving problem also switches locations, or remains the
same.

Pete

# 1618. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-25 21:43:18 UTC
From: mark.aren.nz@gmail.com
Message-ID: <e3b3f28c-4e39-485d-9b6e-3120840bf34e@q30g2000prq.googlegroups.com>
Source record: 4105
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment
Body handling: HTML body converted to readable text

Hello,

There should be a reciprocal relationship between the modules
regardless of height, antennas etc. as long as TX power and RX
sensitivity of the modules are the same (which they appear to be).

The modules are unlikely to have very good input filters at 868MHz, so
any adjacent channel interference (GSM etc.) is likely to cause the
out of balance behaviour.

Try heading in a different direction outside, or go somewhere else
with your experiment.

For your real world application, are you likely to have any site close
to adjacent channel transmitters (cell or broadcast) ? If so, think
about a decant front end filters. This could be costly, but might save
you...

Regards,

Mark

On Oct 25, 9:25 am, jimmi...@gmail.com wrote:
> On Oct 24, 2:26 pm, "Anthony Fremont" wrote:
>
>
>
>
>
> > Mark wrote:
> > > On Oct 24, 2:00 pm, "Paul Hovnanian P.E." wrote:
> > > wow so many of these replies are wrong..
>
> > This is normal when antenna "theory" comes up.
>
> > > in almost all cases, RF path losses are RECIPROCAL.
>
> > I agree, including the antenna gains (meaning that the antennas at each end
> > don't have to match).
>
> > > (even a 1/2 silvered mirror is reciprocal to light)
>
> > Well that guy is usually on a differet page.
>

> > > As some have said, the cause of your issue is probably interference to
> > > the outside receiver.
>
> > That's what I think is the most likely cause. The guy outside probably has
> > his Nextel phone with him. ;-)
>
> > > Or maybe something about the indoor setup is causing the indoor Tx to
> > > operate at lower power.
>
> > I suppose that's possible too. The OP should make sure the power supplies
> > are equivalent (meaning that the output power would suffer more than the
> > receiver gain with a drooping supply). So check the indoor supply.
>
> > > It is very unusual for RF path loss to be non-reciprocal.- Hide quoted text -
>
> > - Show quoted text -
>
> It is assumed that the path to and from the office should be inferior
> to the line of sight path out on the street. This may or may not be
> true. The building may actually be offering gain in certain
> directions. I would start by seeing if the same condition existed at
> many more locations. If it does then other ideas need to be examined,
> I would start by examining the RF environment outside the building.
>
> Jimmie- Hide quoted text -
>
> - Show quoted text -

# 1619. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-25 21:54:59 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <8zMMk.55399$vX2.36923@bignews6.bellsouth.net>
Source record: 4106

raypsi wrote:
> Hey all:
>
> I tore down a transformer I got from ebay it was a Zenith TV power
> transformer from days gone by. Re wound it with 17AWG wire on the
> secondary and primary. It powers up my 4-1000A filament nicely with
> 7.25VAC from 120VAC mains. I used a penta-filar winding on the
> secondary. Shimmed the bobbin in the core window with some 1/8 thick
> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
> transformer and now is a 83watt buzzer / 157watt filament transformer.
>
> So what is the cheapest I can gits away with sealing these laminations
> from buzzing, I used up all my epoxy sealing the windings.
>
> 73
>
> n8zu
I've sealed rewound filter chokes by dipping them in a bucket of
polyurethane varnish.

# 1620. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-25 23:21:12 UTC
From: W3CQH <hsgorden@comcast.net>
Message-ID: <qfqdnZYsC6J3NJ7UnZ2dnUVZ_g2dnZ2d@comcast.com>
Source record: 4107
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

"dgleeson422111" <dgleeson3@eircom.net> wrote in message
news:159dee31-5436-4f46-ae9d-48214eec09ca@k37g2000hsf.googlegroups.com...
Hello All

We have a propagation issue that is confusing us. We have two 868MHz
modules on test, each capable of 500mW transmission.

We are testing to find the range of communication. We are testing them
as follows. One remains in our office while the other is taken to the
street outside. we are communicating charecter strings such as "Im at
the lamp post number 1" etc. There is somebody at each end sending
text strings in a continuous conversation. There is no protocol, error
checking or error recovery.

What we have repetadly found is that the radio in the office can
receive long after the radio in the street has stopped receiving. (The
person with the radio in the street is moving away from the office.)

The radios are the same and the power supplies to the radios are the
same. Indeed switching the radios gives the same effect.

The propagation paths between the two radios are the same in terms of
distance. However the radio signal transmitted from the office travels
through walls first before then traveling through open space. Its the
opposite for the radio in the street, firstly traveling through space
and then through the walls in the office.

We did think we had identified an interfeering source in one direction
(when moving away from the office) so we started moving in the
opposite direction. We found exactly the same effect.

Are we getting interfeerance from GSM, ISM or Paging?

As far as GSM bands go in Europe 890&#65533;915 MHz OR 1710&#65533;1785 MHz So these
shouldnt be our problem.

ISM is where we intend to operate and the greatest band occupancy
should be 10%. So we should get communication even though we would get
some interfeerance.

Paging - well this has very much gone out of fashion in Europe. But
even if it was the cause then wouldnt it be intermittant
communication. We have a constant problem.

Can anyone shed light on this phenomonon? Is it an issue of wireless
propagation that Im not familiar with or is it Interfeerance?

Best regards, and thanks for any input.

Denis

---
http://www.CentronSolutions.com

its interesting that a commercial company would bring a problem such as this to a bunch of amateur radio operators... true some of the amateurs may be professional engineers, but the remainder are not! I guess that in today's market place we try to gain information on the dirt and cheap way.

# 1621. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 00:14:27 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <4903b656$0$4918$9a6e19ea@unlimited.newshosting.com>
Source record: 4108
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.
>
> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
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> same. Indeed switching the radios gives the same effect.
>
> The propagation paths between the two radios are the same in terms of
> distance. However the radio signal transmitted from the office travels
> through walls first before then traveling through open space. Its the
> opposite for the radio in the street, firstly traveling through space
> and then through the walls in the office.
>
> We did think we had identified an interfeering source in one direction
> (when moving away from the office) so we started moving in the
> opposite direction. We found exactly the same effect.
>
> Are we getting interfeerance from GSM, ISM or Paging?
>
> As far as GSM bands go in Europe 890ï¿½915 MHz OR 1710ï¿½1785 MHz So these
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> some interfeerance.
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> communication. We have a constant problem.
>

> Can anyone shed light on this phenomonon? Is it an issue of wireless
> propagation that Im not familiar with or is it Interfeerance?
>
> Best regards, and thanks for any input.
>
> Denis
> _____________________
> http://www.CentronSolutions.com

What is the modulation type and data rate? Could be a delay spread issue. Maybe the outside unit is receiving a reflected signal from the surface of a nearby structure and is experiencing inter-symbol interference that by chance the base unit is shielded from. This would occur only if a high symbol rate was being used.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1622. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 00:21:28 UTC
From: Joerg <notthisjoergsch@removethispacbell.net>
Message-ID: <hKOMk.4404$as4.2658@nlpi069.nbdc.sbc.com>
Source record: 4109
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

W3CQH wrote:

[...]

> its interesting that a commercial company would bring a problem such as this
> to a bunch of amateur radio operators... true some of the amateurs may be
> professional engineers, but the remainder are not! I guess that in today's
> market place we try to gain information on the dirt and cheap way.
>

Nah, that's ok. Every one of us occasionally runs into an unusual
situation. Then one can either stew on it for days without getting to
the ground of it, or ask. IMHO it is a sign of maturity if somebody has
the guts to say "Hey, guys, this problem here really has us puzzled".

That is especially true for EMI cases and this sure looks like one.
Sometimes a brief hint by someone who has been in the trenches for
decades can get things going again. And most older ham radio operators
had that exposure, fixing the neighbor's electronics because their
manufacturers messed up.

--
Regards, Joerg

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"gmail" domain blocked because of excessive spam.
Use another domain or send PM.

# 1623. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 01:10:26 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6mhuceFgoaqdU1@mid.individual.net>
Source record: 4110
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

Tio Pedro wrote:

> I agree. But, one thing that should be proven is that both modules
> are working as intended. The one being used for the remote
> application *could* be defective. Swap modules and see if the
> receiving problem also switches locations, or remains the
> same.

The OP said that he did that, and the problem remained. It's certainly a desensing problem due to local interference at one end. That's the only possible cause.

# 1624. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 06:03:24 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.10.26.06.03.24.886340@localhost.localdomain>
Source record: 4111

A good trick for the lams is clear nail polish as you reassemble them.
Just a quick wipe, as it'll spread as you squeeze in the last few lams
under a "Quick-Grip" clamp.

Cheers!

# 1625. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 06:53:19 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B4313398D34B2MDWN@194.177.96.78>
Source record: 4112

I'll second that.

Varnish is the best thing. Warm the varnish and the
transformer first before you dunk it. That will reduce
the viscosity and improve penetration. A little thinner
in the pot may help too. Vacuum/pressure impregnation is
better than dipping... but dipping can work well on a buzz.

There is even special dipping resin to reduce noise that
leaves the part looking like it's been dipped in a candy
coating. It's a soft, rubbery, epoxy coating.

Oh, and the teflon isn't so great as a shim. You might try
nomex paper, G-10 PC board scraps, fish or kraft paper even
typing paper, calendered cardboard (like shoe box cardbord)
or wood. Teflon will withstand the heat but it tends to
cold flow which makes it dimensionally unstable. The amount
of mechanical force between the core halves can be surprising.
Though in your transformer teflon may be be OK. In a choke
it can be a source of bewilderment as the gap decreases. Yes,
I've had this happen.

Any material that will soften when it's hot, like perspex/plexiglas
isn't a good choice either. I found this in an inductor for a
10KW boost converter that an otherwise reliable supplier built
for me.

For varnish, I like Dolphs (Von-Roll.) Failing that I use
marine spar varnish. Some varnishes are corrosive to copper
and over time will cause windings of fine guage to open if
any copper is exposed.

ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in
news:8zMMk.55399$vX2.36923@bignews6.bellsouth.net:

> I've sealed rewound filter chokes by dipping them in a bucket of
> polyurethane varnish.

# 1626. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 10:19:38 UTC
From: ml <m@di.net>
Message-ID: <m-59381A.06193826102008@news.optonline.net>
Source record: 4113
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

In article <4903b656$0$4918$9a6e19ea@unlimited.newshosting.com>,
RFI-EMI-GUY <Rhyolite@NETTALLY.COM> wrote:

> dgleeson422111 wrote:
> > Hello All
> >
> > We have a propagation issue that is confusing us. We have two 868MHz
> > modules on test, each capable of 500mW transmission.
> >
> > We are testing to find the range of communication. We are testing them
> > as follows. One remains in our office while the other is taken to the
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> > the lamp post number 1" etc. There is somebody at each end sending
> > text strings in a continuous conversation. There is no protocol, error
> > checking or error recovery.
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> > What we have repetadly found is that the radio in the office can
> > receive long after the radio in the street has stopped receiving. (The
> > person with the radio in the street is moving away from the office.)
> >
> > The radios are the same and the power supplies to the radios are the
> > same. Indeed switching the radios gives the same effect.
> >
> > The propagation paths between the two radios are the same in terms of
> > distance. However the radio signal transmitted from the office travels
> > through walls first before then traveling through open space. Its the
> > opposite for the radio in the street, firstly traveling through space
> > and then through the walls in the office.
> >
> > We did think we had identified an interfeering source in one direction
> > (when moving away from the office) so we started moving in the
> > opposite direction. We found exactly the same effect.
> >
> > Are we getting interfeerance from GSM, ISM or Paging?
> >
> > As far as GSM bands go in Europe 890–915 MHz OR 1710–1785 MHz So these
> > shouldnt be our problem.
> >
> > ISM is where we intend to operate and the greatest band occupancy
> > should be 10%. So we should get communication even though we would get
> > some interfeerance.
> >
> > Paging - well this has very much gone out of fashion in Europe. But

> > even if it was the cause then wouldnt it be intermittant
> > communication. We have a constant problem.
> >
> > Can anyone shed light on this phenomonon? Is it an issue of wireless
> > propagation that Im not familiar with or is it Interfeerance?
> >
> > Best regards, and thanks for any input.
> >
> > Denis
> > _____
> > http://www.CentronSolutions.com
>
> What is the modulation type and data rate? Could be a delay spread
> issue. Maybe the outside unit is receiving a reflected signal from the
> surface of a nearby structure and is experiencing inter-symbol
> interference that by chance the base unit is shielded from. This would
> occur only if a high symbol rate was being used.

what type of amateur radio application is this for? Or is it a commercial application posted in this amateur radio group? just wondering

# 1627. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 11:22:19 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <POudnQdiAY9xz5nUnZ2dnUVZ_rjinZ2d@bright.net>
Source record: 4114

> 
> 
> what type of amateur radio application is this for? Or is it a
> commercial application posted in this amateur radio group? just
> wondering

What amateur band covers 868 MHz? Did we get a new one? I'll have to order another transverter, I guess ;)

Well, to get this post be on topic, does anyone know of a good source for some SPDT coaxial relays good at 902 MHz and good for 350 Watts at 902?

Scott
N0EDV

# 1628. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 14:03:15 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <WM_Mk.17148$UD6.12654@newsfe07.iad>
Source record: 4115

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:8zMMk.55399$vX2.36923@bignews6.bellsouth.net...
> raypsi wrote:
>>
>> n8zu
> I've sealed rewound filter chokes by dipping them in a bucket of
> polyurethane varnish.

This would work even better if you could pull a slight vacuum
on the bucket to get the air bubbles out. I believe that's how
the manufacturer's did it. There was a thread on this over on
AMFONE.NET a few month's back.

pete k1zjh

# 1629. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 14:40:08 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B435831173712MDWN@194.177.96.78>
Source record: 4116

Uh! Sorry Ray, it was near 2AM and I misread this. Of course
there's no gap in the core it's a linear AC transformer. No
DC in the windings and so no gap.

Usually I'd do everything I can to reduce any gap, inclduing
interleaving the laminations, to reduce the magnetizing current.

I just wasn't thinking, that happens sometimes.

raypsi <RBorowiak@gmail.com> wrote in news:ea79280c-6148-42a5-be23-
33e848418174@n1g2000prb.googlegroups.com:

>Shimmed the bobbin in the core window with some 1/8 thick
> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
> transformer and now is a 83watt buzzer / 157watt filament transformer.

# 1630. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 19:13:23 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Fj3Nk.48512$SH5.42628@newsfe08.iad>
Source record: 4117

As was suggested by Grumpy... missed it first time.

Pedro

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:WM_Mk.17148$UD6.12654@newsfe07.iad...
>
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:8zMMk.55399$vX2.36923@bignews6.bellsouth.net...
>> raypsi wrote:
> >>
>>> n8zu
>> I've sealed rewound filter chokes by dipping them in a bucket of
>> polyurethane varnish.
>
> This would work even better if you could pull a slight vacuum
> on the bucket to get the air bubbles out. I believe that's how
> the manufacturer's did it. There was a thread on this over on
> AMFONE.NET a few month's back.
>
> pete k1zjh
>

# 1631. Looking for Hallicrafters S-118 schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 21:37:12 UTC
From: GaryM <gary@alma.demon.co.uk>
Message-ID: <cq5Nk.78054$E41.48258@text.news.virginmedia.com>
Source record: 4118

I recently posted a similar message to the boatanchors newagroup, but I have had no reply, so I hope that perhaps a different readership of this newsgroup might be able to help.

At a recent radio rally I picked up a Hallicrafters S-118 receiver. It's a bit tatty, but I was interested since I have never owned a valve (tube) receiver. I've located a scan of the service manual on the BAMA website, but the schematic was unreadable. I've found a number of US websites which sell the manual, but the cost plus postage is about the same as the rx cost! I will go this route if nothing turns up.

If anyone can help with the schematic or information on the power supply I would be very grateful. I have no idea what voltages the power supply is supposed to generate, but one idea is to replace the US transformer with a UK equivalent. The power supply appears to have a semiconductor doubler on the output side. I am quite happy to remove this and use the correct secondary voltage from a UK transformer. I may be possibly offending the purists, but I am happy to replace as much of the PSU as necessary just to get the rx going again. I do have some high voltage transformers in my junkbox despite never having constructed any tube equipment.

During the various searches it appears that the S-118 has a mk1 and mk2 version. If anyone could explain the difference (so that I can order the right manual) I would be grateful

73

--Gary (M1GRY)

# 1632. Re: Looking for Hallicrafters S-118 schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-26 22:50:54 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <haCdnfL9ifPNaZnUnZ2dneKdnZydnZ2d@pipex.net>
Source record: 4119

GaryM wrote:
> I recently posted a similar message to the boatanchors newagroup, but I
> have had no reply, so I hope that perhaps a different readership of this
> newsgroup might be able to help.
>
> At a recent radio rally I picked up a Hallicrafters S-118 receiver. It's
> a bit tatty, but I was interested since I have never owned a valve
> (tube) receiver. I've located a scan of the service manual on the BAMA
> website, but the schematic was unreadable. I've found a number of US
> websites which sell the manual, but the cost plus postage is about the
> same as the rx cost! I will go this route if nothing turns up.
>
> If anyone can help with the schematic or information on the power supply
> I would be very grateful. I have no idea what voltages the power supply
> is supposed to generate, but one idea is to replace the US transformer
> with a UK equivalent. The power supply appears to have a semiconductor
> doubler on the output side. I am quite happy to remove this and use the
> correct secondary voltage from a UK transformer. I may be possibly
> offending the purists, but I am happy to replace as much of the PSU as
> necessary just to get the rx going again. I do have some high voltage
> transformers in my junkbox despite never having constructed any tube
> equipment.
>
> During the various searches it appears that the S-118 has a mk1 and mk2
> version. If anyone could explain the difference (so that I can order the
> right manual) I would be grateful
==========
Suggest you keep the rx as is an feed it with 115-120 V ,either from a
variac or a sturdy 230/240 V transformer with a centre tap , using only
the primary winding as an auto-transformer (not using the secondary
windings) (Large) transformers can often be found at Junk sales or flea
markets . Another possibility is using 2 transformers ; one being
230/240 to 12 V or about and the second one 230/240 to 24V or about
By connecting the the secondaries you can get 115/120V.

Of course you have to ensure that the transformer(s) can handle more
than 100 W to be on the safe side . The Hallicrafters rx will highly
likely not consume more than 100 W

If the rx has not been used for considerable time ,the electrolytic
capacitors might have to be reformed . Do that (preferably) with a
variac or with a few transformers with say 12 -24 V secondaries,
starting with say 12 V connected to the rx power input ,after a while
increasing the voltage by series connection with another low voltage
secondary ,either from the same or a different transformer ( ensure that

phasing is OK by checking output with voltmeter) .
To minimise power required while reforming the electrolytics you can remove the valves(tubes) (but of course not the HV rectifier valve if fitted

There is 1 potential snag using equipment designed for 60 Hz (USA) on a 50 Hz supply system . If the transformer of the rx is marginal capacity wise , it could become rather warm when connected to a 50 Hz supply system , because the higher frequency permits less transformer iron.

Note: During the valve(tube)equipment era ,aircraft required AC .
To minimise weight the transfomers used had to be as low in weight as possible , that's why the onboard supply system operated at 400 Hz.

Good luck with your vintage RX

Frank GM0CSZ / KN6WH

# 1633. eBay: Henry Bird Linear & SWR panel

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-27 21:33:23 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <EsqNk.6131$be.4403@nlpi061.nbdc.sbc.com>
Source record: 4120

http://search.ebay.com/_W0QQsassZwd5jfrQQfrppZ50QQfsopZ32QQfsooZ2QQrdZ0

# 1634. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-27 22:51:59 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <jCrNk.6137$be.3381@nlpi061.nbdc.sbc.com>
Source record: 4121

If you have bolts thru the lams have you torqued them to the point of twisting them off? If you haven't you might want to loosen then and add some more varnish to the lams while they're loose and then torque them.
Another possibility: Many of the transformers in microwave ovens have a bead of weld across all the laminations and I've seen this on rectifiers used in Telco applications. Keeps them quiet and I and has some negatives like letting line spikes thru but on a filament that is meaningless. Lam eddy currents area dead issue as I've heard that the old Bell Labs had accepted this practice.
I had a 30S-1 with minor buzz but when I added 100 volts to the screen the hum was about to drive me nuts but torquing to lams solved the problem, I twisted off a couple of bolts.

--
73
Hank WD5JFR
"raypsi" <RBorowiak@gmail.com> wrote in message
news:ea79280c-6148-42a5-be23-33e848418174@n1g2000prb.googlegroups.com...
> Hey all:
>
> I tore down a transformer I got from ebay it was a Zenith TV power
> transformer from days gone by. Re wound it with 17AWG wire on the
> secondary and primary. It powers up my 4-1000A filament nicely with
> 7.25VAC from 120VAC mains. I used a penta-filar winding on the
> secondary. Shimmed the bobbin in the core window with some 1/8 thick
> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
> transformer and now is a 83watt buzzer / 157watt filament transformer.
>
> So what is the cheapest I can gits away with sealing these laminations
> from buzzing, I used up all my epoxy sealing the windings.
>
> 73
>
> n8zu

# 1635. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-27 23:52:28 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B44B5D59633D2MDWN@194.177.96.78>
Source record: 4122

Hmmm!

Bolts through the laminations should have insulators
(usually fiber board washers) under the heads. Just
one end will do, there's no need for them under the
nuts. But shoulder washers are best so the bolts don't
short any laminations together deeper into the core.

If uninsulated the bolt can form a poorly coupled shorted
turn and that in itself can cause noise, heating of the
core and the hardware as well as spray flux around where
you wouldn't have expected any. How bad it is depends
on the locations of the holes in the core.

A bead of weld across the ends of the laminations won't add
to the eddy currents significantly. Steel isn't a great
conductor. The weld's cross section is small and it's very
poorly coupled to the primary.

Why would a weld across the laminations let line spikes
though?

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in
news:jCrNk.6137$be.3381@nlpi061.nbdc.sbc.com:

> If you have bolts thru the lams have you torqued them to the point of
> twisting them off? If you haven't you might want to loosen then and add
> some more varnish to the lams while they're loose and then torque them.
> Another possibility: Many of the transformers in microwave ovens have a
> bead of weld across all the laminations and I've seen this on rectifiers
> used in Telco applications. Keeps them quiet and I and has some
> negatives like letting line spikes thru but on a filament that is
> meaningless. Lam eddy currents area dead issue as I've heard that the
> old Bell Labs had accepted this practice.
> I had a 30S-1 with minor buzz but when I added 100 volts to the screen
> the hum was about to drive me nuts but torquing to lams solved the
> problem, I twisted off a couple of bolts.
>

# 1636. Re: Looking for Hallicrafters S-118 schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 00:20:02 UTC
From: GaryM <gary@alma.demon.co.uk>
Message-ID: <SUsNk.78573$E41.6669@text.news.virginmedia.com>
Source record: 4123

Hi Frank,

thankyou for your reply. I already have a Maplin 240->120V autotransformer which should do the job nicely. The radio has been somewhat hacked around with and did come with a heavy and ugly UK transformer wired as an auto-transformer. It is now removed and will be used in a future valve based project.

From the poor schematic which I have the secondary goes into a semiconductor diode voltage doubler. There is then some kind of resistive chain which I assume generates the voltages for the screens of the valves. I really need a clear set of schematics to see what values should be found.

The valve heater voltage part of the schematic is a mystery. The valves are 4 x 6.3V and 1 x 12.6V, but the schematic suggests a different line up of 2 x 6.3V and 3 x 12.6V. The valve ids are not readable on the schematic. Perhaps the schematic was from a mk1, although it is supposed to be from a mk2.

I have now removed all the components which make up the voltage doubler and the main triple capacitor is now isolated. I will try to reform it (from a variable DC supply) and check that it is still working. The resistors in the chain are clearly not originals. They may have been changed when the auto-transformer was added.

73

--Gary (M1GRY)

# 1637. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 01:39:57 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <N3uNk.6144$be.293@nlpi061.nbdc.sbc.com>
Source record: 4124

Grumpy
Years ago in 93 or so on a Telco fiber system by Alcatel we took severe hits when the air conditioner came on and it was traced to the station rectifier. The Gould rectifiers had a weld bead and when we replaced them another make which I can't recall that didn't have weld beads the problem went away. Its quite strange since the rectifiers floated big batteries but a vco in system was sensitive to the spike. After doing some research I found an explanation that I can't recall because I was too busy with other problems and mine had gone away. Alcatel spent several hundred thousand trying to find the problem and I stumbled on to it by shear luck.

73
Hank WD5JFR
"Grumpy The Mule" <s_foonly@foo.bar> wrote in message
news:Xns9B44B5D59633D2MDWN@194.177.96.78...
> Hmmm!
>
> Bolts through the laminations should have insulators
> (usually fiber board washers) under the heads. Just
> one end will do, there's no need for them under the
> nuts. But shoulder washers are best so the bolts don't
> short any laminations together deeper into the core.
>
> If uninsulated the bolt can form a poorly coupled shorted
> turn and that in itself can cause noise, heating of the
> core and the hardware as well as spray flux around where
> you wouldn't have expected any. How bad it is depends
> on the locations of the holes in the core.
>
> A bead of weld across the ends of the laminations won't add
> to the eddy currents significantly. Steel isn't a great
> conductor. The weld's cross section is small and it's very
> poorly coupled to the primary.
>
> Why would a weld across the laminations let line spikes
> though?
>
>
>
>
> "Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in
> news:jCrNk.6137$be.3381@nlpi061.nbdc.sbc.com:
>

>> If you have bolts thru the lams have you torqued them to the point of
>> twisting them off? If you haven't you might want to loosen then and
>> add
>> some more varnish to the lams while they're loose and then torque
>> them.
>> Another possibility: Many of the transformers in microwave ovens
>> have a
>> bead of weld across all the laminations and I've seen this on
>> rectifiers
>> used in Telco applications. Keeps them quiet and I and has some
>> negatives like letting line spikes thru but on a filament that is
>> meaningless. Lam eddy currents area dead issue as I've heard that
>> the
>> old Bell Labs had accepted this practice.
>> I had a 30S-1 with minor buzz but when I added 100 volts to the
>> screen
>> the hum was about to drive me nuts but torquing to lams solved the
>> problem, I twisted off a couple of bolts.
>>
>

# 1638. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 03:29:46 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0810280318140.9467@sdf.lonestar.org>
Source record: 4125

On Sat, 25 Oct 2008, raypsi wrote:

> Date: Sat, 25 Oct 2008 10:25:23 -0700 (PDT)
> From: raypsi <RBorowiak@gmail.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: I built a 7.5VAC 21Amp transformer now it has lots of buzz
>
> Hey all:
>
> I tore down a transformer I got from ebay it was a Zenith TV power
> transformer from days gone by. Re wound it with 17AWG wire on the
> secondary and primary. It powers up my 4-1000A filament nicely with
> 7.25VAC from 120VAC mains. I used a penta-filar winding on the
> secondary. Shimmed the bobbin in the core window with some 1/8 thick
> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
> transformer and now is a 83watt buzzer / 157watt filament transformer.
>
> So what is the cheapest I can gits away with sealing these laminations
> from buzzing, I used up all my epoxy sealing the windings.
>
> 73
>
> n8zu
>

This might be a little "far-out" but, besides just buying more epoxy and just doing it right, maybe you could find a can or metal box, put the transformer into the box, and fill the box up with enough sand that you have 1-2 inches all around the transformer, and that might muffle the buzz. You'll need to worry about heat dissipation through that sand which will act like an insulator, but if you are on the air only a couple of hours per day, it should not get dangerously hot (however, many of the old hermetically sealed transformers were burried in a waxy-tar that was quite hard at room temperature).

Your other option is to figure out some clamping arrangement so that the laminations are held close and tight.

Re-winding transformers is fun, but next time you want some off-beat voltage, maybe scrounge up higher voltages (eg. car battery chargers) and use either a variac or power resistor (with sufficient heat dissipation) to bring the voltage down to where you want it and save yourself the headaches and earaches. Or, don't take the laminations apart but feed the wire (stranded) through the holes that are left.

Or, other kludge-cheapskate approaches.

Good luck.

# 1639. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 18:20:22 UTC
From: Radio_Dick <rspost@mail.com>
Message-ID: <3103a4b3-9e42-445f-9c4e-0f26997fd19c@x16g2000prn.googlegroups.com>
Source record: 4126
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

On Oct 24, 5:14 am, dgleeson422111 <dglees...@eircom.net> wrote:
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.
>
> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
>
> The radios are the same and the power supplies to the radios are the
> same. Indeed switching the radios gives the same effect.
>
> The propagation paths between the two radios are the same in terms of
> distance. However the radio signal transmitted from the office travels
> through walls first before then traveling through open space. Its the
> opposite for the radio in the street, firstly traveling through space
> and then through the walls in the office.
>
> We did think we had identified an interfeering source in one direction
> (when moving away from the office) so we started moving in the
> opposite direction. We found exactly the same effect.
>
> Are we getting interfeerance from GSM, ISM or Paging?
>
> As far as GSM bands go in Europe 890–915 MHz OR 1710–1785 MHz So these
> shouldnt be our problem.
>
> ISM is where we intend to operate and the greatest band occupancy
> should be 10%. So we should get communication even though we would get
> some interfeerance.
>
> Paging - well this has very much gone out of fashion in Europe. But
> even if it was the cause then wouldnt it be intermittant
> communication. We have a constant problem.
>

> Can anyone shed light on this phenomonon? Is it an issue of wireless
> propagation that Im not familiar with or is it Interfeerance?
>
> Best regards, and thanks for any input.
>
> Denis
> _____http://www.CentronSolutions.com

Denis,

I agree with some of your previous posts - the outside receiver is likely being desensed by a strong signal, perhaps away from or a harmonic of the frequency you're using. I suggest trying the test away from town and at least 10km from strong transmitting towers. Let us know what you find out - may help those of us who do UHF/VHF mobile/ portable hamming.

As a ham I have NOT PROBLEM with the commercial community asking questions on a ham radio group - we can ALL learn from this.

Cheers,

Dick Post, N7EMW
www.repdesign.us

# 1640. Democrats sexy meltdown

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 18:24:58 UTC
From: tyreemand@gmail.com
Message-ID: <2dd60dad-8eb1-480a-a423-d64cd48f80cb@n33g2000pri.googlegroups.com>
Source record: 4127
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://salo.coolpage.biz/amateur.htm read full Natalie felt it was only fair that I remove the gag from Bills mouth so he could answer his loving wife and daughters probing questions. After clearing his throat he said something that I will never forget Hillary I feel your pain http://groups.google.com/group/sexual-meltdown http://sexual-meltdown.blogspot.com/

# 1641. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 19:19:44 UTC
From: Mark <makolber@yahoo.com>
Message-ID: <8a181d97-fbfc-450b-9944-2822ae4f203b@n33g2000pri.googlegroups.com>
Source record: 4128
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

> 
> What is the modulation type and data rate? Could be a delay spread
> issue. Maybe the outside unit is receiving a reflected signal from the
> surface of a nearby structure and is experiencing inter-symbol
> interference that by chance the base unit is shielded from. This would
> occur only if a high symbol rate was being used.
> 
> 

i was thinking about that...but no....

all the multi-path paths are reciprocal as well,,, so whatever the
delay spread is one way should be the same the other way.

Mark

# 1642. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 19:21:41 UTC
From: Tam <t-tammaru@comcast.net>
Message-ID: <jeydnam0_4ai-5rUnZ2dnUVZ_vednZ2d@comcast.com>
Source record: 4129
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

"Radio_Dick" <rspost@mail.com> wrote in message
news:3103a4b3-9e42-445f-9c4e-0f26997fd19c@x16g2000prn.googlegroups.com...
On Oct 24, 5:14 am, dgleeson422111 <dglees...@eircom.net> wrote:
> Hello All
>
> We have a propagation issue that is confusing us. We have two 868MHz
> modules on test, each capable of 500mW transmission.
>
> We are testing to find the range of communication. We are testing them
> as follows. One remains in our office while the other is taken to the
> street outside. we are communicating charecter strings such as "Im at
> the lamp post number 1" etc. There is somebody at each end sending
> text strings in a continuous conversation. There is no protocol, error
> checking or error recovery.
>
> What we have repetadly found is that the radio in the office can
> receive long after the radio in the street has stopped receiving. (The
> person with the radio in the street is moving away from the office.)
>
> The radios are the same and the power supplies to the radios are the
> same. Indeed switching the radios gives the same effect.
>
> The propagation paths between the two radios are the same in terms of
> distance. However the radio signal transmitted from the office travels
> through walls first before then traveling through open space. Its the
> opposite for the radio in the street, firstly traveling through space
> and then through the walls in the office.
>
> We did think we had identified an interfeering source in one direction
> (when moving away from the office) so we started moving in the
> opposite direction. We found exactly the same effect.
>
> Are we getting interfeerance from GSM, ISM or Paging?
>
> As far as GSM bands go in Europe 890ï¿½915 MHz OR 1710ï¿½1785 MHz So these
> shouldnt be our problem.
>
> ISM is where we intend to operate and the greatest band occupancy
> should be 10%. So we should get communication even though we would get
> some interfeerance.
>
> Paging - well this has very much gone out of fashion in Europe. But
> even if it was the cause then wouldnt it be intermittant

> communication. We have a constant problem.
>
> Can anyone shed light on this phenomonon? Is it an issue of wireless
> propagation that Im not familiar with or is it Interfeerance?
>
> Best regards, and thanks for any input.
>
> Denis
> _____http://www.CentronSolutions.com

Denis,

I agree with some of your previous posts - the outside receiver is
likely being desensed by a strong signal, perhaps away from or a
harmonic of the frequency you're using. I suggest trying the test away
from town and at least 10km from strong transmitting towers. Let us
know what you find out - may help those of us who do UHF/VHF mobile/
portable hamming.

As a ham I have NOT PROBLEM with the commercial community asking
questions on a ham radio group - we can ALL learn from this.

Cheers,

Dick Post, N7EMW
www.repdesign.us

**********
I don't know why I don't get the > on your response, but whatever.
He can get some feel for what is going on by taking *both* radios outside
near his office, and walking around. He should be able to find a particular
area that has poor reception. I don't buy the explanations for antenna gain
and multipath, they should affect both directions of transmission equally.

Tam

# 1643. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-28 23:52:16 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B45B5CCECE822MDWN@194.177.96.78>
Source record: 4130

Howdy Hank,

Thanks for the follow-up! Perhaps they used a voltage regulating
transformer. I think some of the telcom rectifiers used them.
I know some mainframe computers did.

It's still a curiosity to me. Though I've seen enough occult
behavior from wound magnetic devices that I wouldn't discount it,
I'm tempted to wonder if there's another variable that was
coincident with the welded laminations.

73

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in
news:N3uNk.6144$be.293@nlpi061.nbdc.sbc.com:

> Grumpy
> Years ago in 93 or so on a Telco fiber system by Alcatel we took severe
> hits when the air conditioner came on and it was traced to the station
> rectifier. The Gould rectifiers had a weld bead and when we replaced
> them another make which I can't recall that didn't have weld beads the
> problem went away. Its quite strange since the rectifiers floated big
> batteries but a vco in system was sensitive to the spike. After doing
> some research I found an explanation that I can't recall because I was
> too busy with other problems and mine had gone away. Alcatel spent
> several hundred thousand trying to find the problem and I stumbled on to
> it by shear luck.
>
> 73
> Hank WD5JFR

# 1644. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 00:04:14 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B45B7D3F9BB32MDWN@194.177.96.78>
Source record: 4131

It's not so far out of a suggestion. One of my Zenith console
radios has some remote control solenoid mounted inside a metal
box that's lined with rubber.

The sand is a pretty good thermal conductor (compared to air),
better than epoxy. In fact they fill the cheaper type of epoxy
potting material with coarse quartzite or powdered limestone
to improve its the thermal conductivity. It's the air trapped
between the grains of sand that provide some thermal insulation.
Mixing sand with epoxy or oil fills the interstaces which would
otherwise be filled with air.

Some one mentioned coating the laminations with nail polish as you
stack them up to glue them together. Either that or little varnish
would most likely have prevented any buzzing laminations.

Not taking the laminations off is a good suggestion too if it's
possible. For instance microwave oven transformers just chisel
off the secondary and wind a new one. Though for smaller
transformers that often isn't possible.

Stray Dog <sdog2008@sdf.lonestar.org> wrote in
news:Pine.NEB.4.64.0810280318140.9467@sdf.lonestar.org:

>
> This might be a little "far-out" but, besides just buying more epoxy
> and just doing it right, maybe you could find a can or metal box, put
> the transformer into the box, and fill the box up with enough sand
> that you have 1-2 inches all around the transformer, and that might
> muffle the buzz. You'll need to worry about heat dissipation through
> that sand which will act like an insulator, but if you are on the air
> only a couple of hours per day, it should not get dangerously hot
> (however, many of the old hermetically sealed transformers were
> burried in a waxy-tar that was quite hard at room temperature).
>
> Your other option is to figure out some clamping arrangement so that
> the laminations are held close and tight.
>
> Re-winding transformers is fun, but next time you want some off-beat
> voltage, maybe scrounge up higher voltages (eg. car battery chargers)
> and use either a variac or power resistor (with sufficient heat
> dissipation) to bring the voltage down to where you want it and save
> yourself the headaches and earaches. Or, don't take the laminations
> apart but feed the wire (stranded) through the holes that are left.
>
> Or, other kludge-cheapskate approaches.

>
> Good luck.

# 1645. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 00:09:09 UTC
From: jimmie68@gmail.com
Message-ID: <7fcd542f-cb47-4075-ba9d-67ab0d46a5c1@l62g2000hse.googlegroups.com>
Source record: 4132

On Oct 27, 11:29 pm, Stray Dog <sdog2...@sdf.lonestar.org> wrote:
> On Sat, 25 Oct 2008, raypsi wrote:
> > Date: Sat, 25 Oct 2008 10:25:23 -0700 (PDT)
> > From: raypsi <RBorow...@gmail.com>
> > Newsgroups: rec.radio.amateur.homebrew
> > Subject: I built a 7.5VAC 21Amp transformer now it has lots of buzz
>
> > Hey all:
>
> > I tore down a transformer I got from ebay it was a Zenith TV power
> > transformer from days gone by. Re wound it with 17AWG wire on the
> > secondary and primary. It powers up my 4-1000A filament nicely with
> > 7.25VAC from 120VAC mains. I used a penta-filar winding on the
> > secondary. Shimmed the bobbin in the  core window  with some 1/8 thick
> > virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
> > transformer and now is a 83watt buzzer / 157watt filament transformer.
>
> > So what is the cheapest I can gits away with sealing these laminations
> > from buzzing, I used up all my epoxy sealing the windings.
>
> > 73
>
> > n8zu
>
> This might be a little "far-out" but, besides just buying more epoxy and
> just doing it right, maybe you could find a can or metal box, put the
> transformer into the box, and fill the box up with enough sand that you
> have 1-2 inches all around the transformer, and that might muffle the
> buzz. You'll need to worry about heat dissipation through that sand which
> will act like an insulator, but if you are on the air only a couple of
> hours per day, it should not get dangerously hot (however, many of the old
> hermetically sealed transformers were burried in a waxy-tar that was
> quite hard at room temperature).
>
> Your other option is to figure out some clamping arrangement so that the
> laminations are held close and tight.
>
> Re-winding transformers is fun, but next time you want some off-beat
> voltage, maybe scrounge up higher voltages (eg. car battery chargers)
> and use either a variac or power resistor (with sufficient heat
> dissipation) to bring the voltage down to where you want it and save
> yourself the headaches and earaches. Or, don't take the laminations apart
> but feed the wire (stranded) through the holes that are left.
>

> Or, other kludge-cheapskate approaches.
>
> Good luck.- Hide quoted text -
>
> - Show quoted text -

I have always dunked them in varnish but only got some success with this by
drawing a vaccum then applying pressure. I used an old compressor from
a refrigarator to do this. The tank was made from from pipe and fittings. The best
results I got was winding the core on a block of wood cut the same size as
the core wrapping the wood with cardboard then windng the coil then pushed
then put the core together. I was 18 at the time and a very talented man
named Olin Griggs helped me with this project and let me use his shop.
Olin was a retired engineer that had worked for GE at their Bloomington plant.
Since then the onl transformers I have wound that havent bussed to much
was by modifying a ready built transformer. USually this meant one that I
on which I could keep the primary winding intact. Lately I have gotten interested
in SMPSs for doing this sort of thing. It is very easy to see why industry has
has made the move to them.

Jimmie

# 1646. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 00:09:18 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <OQNNk.6237$be.3542@nlpi061.nbdc.sbc.com>
Source record: 4133

Hey Grump
A transformer is one of the simplest electrical machines and pretty well understood in the classical design but when some of the parameters are changed we don't have much experience or investigation and probably wont. Hot swappable rectifier modules have made transformer based rectifiers uneconomical kinda like carburetors and fuel injection. If you have the time, check with some of the old time designers of transformer rectifiers. Let me now what you find out. I had some notes but those are long gone.
Hank
"Grumpy The Mule" <s_foonly@foo.bar> wrote in message
news:Xns9B45B5CCECE822MDWN@194.177.96.78...
> Howdy Hank,
>
> Thanks for the follow-up! Perhaps they used a voltage regulating
> transformer. I think some of the telcom rectifiers used them.
> I know some mainframe computers did.
>
> It's still a curiosity to me. Though I've seen enough occult
> behavior from wound magnetic devices that I wouldn't discount it,
> I'm tempted to wonder if there's another variable that was
> coincident with the welded laminations.
>
> 73
>
>
>
> "Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in
> news:N3uNk.6144$be.293@nlpi061.nbdc.sbc.com:
>
>> Grumpy
>> Years ago in 93 or so on a Telco fiber system by Alcatel we took
>> severe
>> hits when the air conditioner came on and it was traced to the
>> station
>> rectifier. The Gould rectifiers had a weld bead and when we replaced
>> them another make which I can't recall that didn't have weld beads
>> the
>> problem went away. Its quite strange since the rectifiers floated
>> big
>> batteries but a vco in system was sensitive to the spike. After
>> doing
>> some research I found an explanation that I can't recall because I
>> was

>> too busy with other problems and mine had gone away. Alcatel spent
>> several hundred thousand trying to find the problem and I stumbled on
>> to
>> it by shear luck.
>>
>> 73
>> Hank WD5JFR

# 1647. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 00:39:19 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <XgONk.6240$be.368@nlpi061.nbdc.sbc.com>
Source record: 4134

I left out switch based hot swappable
"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in message
news:OQNNk.6237$be.3542@nlpi061.nbdc.sbc.com...
> Hey Grump
> A transformer is one of the simplest electrical machines and pretty
> well understood in the classical design but when some of the
> parameters are changed we don't have much experience or investigation
> and probably wont. Hot swappable rectifier modules have made
> transformer based rectifiers uneconomical kinda like carburetors and
> fuel injection. If you have the time, check with some of the old time
> designers of transformer rectifiers. Let me now what you find out. I
> had some notes but those are long gone.
> Hank
> "Grumpy The Mule" <s_foonly@foo.bar> wrote in message
> news:Xns9B45B5CCECE822MDWN@194.177.96.78...
>> Howdy Hank,
>>
>> Thanks for the follow-up! Perhaps they used a voltage regulating
>> transformer. I think some of the telcom rectifiers used them.
>> I know some mainframe computers did.
>>
>> It's still a curiosity to me. Though I've seen enough occult
>> behavior from wound magnetic devices that I wouldn't discount it,
>> I'm tempted to wonder if there's another variable that was
>> coincident with the welded laminations.
>>
>> 73
>>
>>
>>
>> "Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in
>> news:N3uNk.6144$be.293@nlpi061.nbdc.sbc.com:
>>
>>> Grumpy
>>> Years ago in 93 or so on a Telco fiber system by Alcatel we took
>>> severe
>>> hits when the air conditioner came on and it was traced to the
>>> station
>>> rectifier. The Gould rectifiers had a weld bead and when we
>>> replaced
>>> them another make which I can't recall that didn't have weld beads
>>> the
>>> problem went away. Its quite strange since the rectifiers floated
>>> big

>>> batteries but a vco in system was sensitive to the spike. After
>>> doing
>>> some research I found an explanation that I can't recall because I
>>> was
>>> too busy with other problems and mine had gone away. Alcatel spent
>>> several hundred thousand trying to find the problem and I stumbled
>>> on to
>>> it by shear luck.
>>>
>>> 73
>>> Hank WD5JFR
>

# 1648. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 01:14:49 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ge8de6$6qf$1@news.albasani.net>
Source record: 4135
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

dgleeson422111 wrote:

>> ...
> Best regards, and thanks for any input.
>
> Denis
> _____________________
> http://www.CentronSolutions.com

Since most of the posts, in their "EXPERT OPINIONS", relate to your receiver being "de-sensed", do you have a way of negating/affirming this?

Begin there, and we can get down to "real problems!" :-) i.e., a wide-band field strength meter, freq counter, etc. will either make all this "right" or "wrong."

Regards,
JS

# 1649. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 01:16:33 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ge8dhf$6qf$2@news.albasani.net>
Source record: 4136
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

John Smith wrote:

> ...
> Regards,
> JS

And, I should have included, beg one, buy one, borrow one, steal one,
etc. ...

Regards,
JS

# 1650. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 05:46:49 UTC
From: Brenda Ann <brendad@shinbiro.com>
Message-ID: <--SdnWQYjp1VZZrUnZ2dnUVZ_sPinZ2d@giganews.com>
Source record: 4137
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

"John Smith" <assemblywizard@gmail.com> wrote in message
news:ge8de6$6qf$1@news.albasani.net...
> dgleeson422111 wrote:
>
> >> ...
>> Best regards, and thanks for any input.
>>
>> Denis
>> _____________________
>> http://www.CentronSolutions.com
>
> Since most of the posts, in their "EXPERT OPINIONS", relate to your
> receiver being "de-sensed", do you have a way of negating/affirming this?
>

Desense is definately a possibility, but I still believe that it's at least
AS good a chance that it's a standing wave issue on the office end. Others
have said to take the 'office' radio outdoors and test the setup that way.
That's a good (and simple) test.

# 1651. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 06:34:21 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B465D4868E62MDWN@194.177.96.78>
Source record: 4138

Howdy Hank,

I've been designing switch mode magnetics for about thirty years now. The more I learn the less I know. It's true that the principles are well known but the implementation is a morass of compromises. At the power level many of my designs operate at, second and third order effects can suddenly become serious and unexpected design complications. Some people enjoy puzzles. I guess that's why I like designing this sort of stuff.

I've worked on a lot of weird stuff, big cap charging supplies, pulse compressors, very high voltage or high current, and tiny stuff with extremely low noise outputs. But I don't have much experience with line frequency magnetics beyond EMI filters. As you say there's not much call for it now. But unfettered by all the weak components the big iron can support amazing overloads, so I think there's still a place for it. At least for now. The cost of steel and copper (and the transportation costs) for such heavy beasts is certainly making them increasingly less attractive.

Lately I've been working on equipment in the 10KW-60KW output range switching at 75KHz range. The whole system weighs much less than just the line frequency transformer that would be required alone.

The only big iron guys I know are now retired or dead. And the companies I've dealt with that make that stuff tend to have very little engineering staff, not much new going on, (other than some efficiency improvements from amorphous cores) they just crank out the product in cook book fashion. I think nuances of it may soon be a lost.

73

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in news:OQNNk.6237$be.3542@nlpi061.nbdc.sbc.com:

> Hey Grump
> A transformer is one of the simplest electrical machines and pretty well
> understood in the classical design but when some of the parameters are
> changed we don't have much experience or investigation and probably

> wont. Hot swappable rectifier modules have made transformer based
> rectifiers uneconomical kinda like carburetors and fuel injection. If
> you have the time, check with some of the old time designers of
> transformer rectifiers. Let me now what you find out. I had some notes
> but those are long gone.
> Hank

# 1652. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 08:02:54 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6mqjltFe8shpU1@mid.individual.net>
Source record: 4139
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

Brenda Ann wrote:

> Desense is definately a possibility, but I still believe that it's at least
> AS good a chance that it's a standing wave issue on the office end. Others
> have said to take the 'office' radio outdoors and test the setup that way.
> That's a good (and simple) test.

I'm /still/ more inclined towards a desense problem - cities are astonishingly noisy these days throughout the RF spectrum. I've recently had 4.9 GHz data transmission problems that were eventually traced to a harmonic of a nearby surveillance TV transmitter!

Bob

# 1653. Re: 868MHz Propagation problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 09:59:31 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <o7bgg41fq19nuqssnp6mk4h4u4kfeuolqt@4ax.com>
Source record: 4140
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.design,rec.radio.amateur.equipment

On Wed, 29 Oct 2008 14:46:49 +0900, "Brenda Ann"
<brendad@shinbiro.com> wrote:

>
>"John Smith" <assemblywizard@gmail.com> wrote in message
>news:ge8de6$6qf$1@news.albasani.net...

>> Since most of the posts, in their "EXPERT OPINIONS", relate to your
>> receiver being "de-sensed", do you have a way of negating/affirming this?

Desense caused by out of band signals if of course possible when we
talk about such toy receivers as most wireless LAN or wireless
headphones are.

However, since the 868 MHz band is a non-licenced band, it is quite
likely that there might be other transmitters (e.g. wireless
headphones) in the area of the moving transmitter, but not near the
office transmitter.

Give a spectrum analyzer to the moving station operator to monitor the
interference level in that frequency band, when the moving transmitter
is off. A scanner receiver with a decent signal strength indicator
might even suffice.

>Desense is definately a possibility, but I still believe that it's at least
>AS good a chance that it's a standing wave issue on the office end.

This is out of the question for any single frequency half duplex
connection, since the path would be reciprocal. In a full duplex dual
frequency point to point system between two _fixed_ station, this
would be definitively possible. Even in this case, moving the other
station by 10-30 cm, you would find a spot, in which there is a good
connections both ways.

Based on my experience at 1297 MHz with a narrow band (16 kHz) signal
in urban environment, you definitively have a lot of multipath nulls
(several nulls every meter), For speech communication, this is not
much of an issue, the faster you move, you have hundreds of nulls
every second and it does not much affect the readability of the
speech. The only problem is that if you stop at a traffic light, you
usually will end up in a multipath null and the communication is
broken, unless you can slide the car a few centimeters.

>Others
>have said to take the 'office' radio outdoors and test the setup that way.
>That's a good (and simple) test.

The OP did swap the radios, but he did not tell if the power supply was also swapped. If the office power supply was faulty and the office transmitter could not deliver the nominal power, this could explain the situation.

Paul

# 1654. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 10:06:39 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <1c8cabda-29c9-4f5e-b70b-970fc328590a@r37g2000prr.googlegroups.com>
Source record: 4141

hey all:

>A good trick for the lams is clear nail polish as you reassemble them.
Just a quick wipe, as it'll spread as you squeeze in the last few
lams
under a "Quick-Grip" clamp.

I could go to the nail shop get a peddicure and coat my lams at the
same time. A great idea if only I could handle the fumes.

>Varnish is the best thing. Warm the varnish and the
transformer first before you dunk it. That will reduce
the viscosity and improve penetration. A little thinner
in the pot may help too.

I lucky I can stand the effects of epoxy but no way varnish. For nail
polish or varnish I gots to gits me a up or down draft venilator
exhastt system.

>If you have bolts thru the lams have you torqued them to the point of
twisting them off? If you haven't you might want to loosen then and
add
some more varnish to the lams while they're loose and then torque
them

Thanks I retorqued them and that reduced the noise by 6db. Now I have
a less effecient buzzer

>Bolts through the laminations should have insulators
(usually fiber board washers) under the heads. Just
one end will do, there's no need for them under the
nuts. But shoulder washers are best so the bolts don't
short any laminations together deeper into the core.

Good idea I seen many a transformer that had fiber spacers over the
whole length of the bolt plus fiber washers..

>put the
transformer into the box, and fill the box up with enough sand that
you
have 1-2 inches all around the transformer, and that might muffle the
buzz. You'll need to worry about heat dissipation through that sand
which
will act like an insulator, but if you are on the air only a couple
of
hours per day,

I likes this one, but I gots alot of kittie litter that comes from some place in Arkansas, it is mostly quartz and some other trace minerals.

The only big iron guys I know are now retired or dead.
And the companies I've dealt with that make that stuff tend to have very little engineering staff, not much new going on, (other than some efficiency improvements from amorphous cores) they just crank out the product in cook book fashion. I think nuances of it may soon be a lost.

Yes lams are going the way of the dinosuars. Maybe that's why they cost so much looky the price of a good audio output transformer for a tube audio amplifier and they go up to at least 20Khz.

Your other option is to figure out some clamping arrangement so that the
laminations are held close and tight.

Yes I think I will put together a vise of sorts. Custom made to fit the transformer.

73 and thanks for all the good information.

n8zu

# 1655. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 12:21:43 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <KO-dnRkE6o3_yJXUnZ2dnUVZ8uWdnZ2d@pipex.net>
Source record: 4142

> The only big iron guys I know are now retired or dead.
> And the companies I've dealt with that make that stuff
> tend to have very little engineering staff, not much new
> going on, (other than some efficiency improvements from
> amorphous cores) they just crank out the product in cook
> book fashion. I think nuances of it may soon be a lost.
>
> Yes lams are going the way of the dinosuars. Maybe that's why they
> cost so much looky the price of a good audio output transformer for a
> tube audio amplifier and they go up to at least 20Khz.
>
> Your other option is to figure out some clamping arrangement so that
> the
> laminations are held close and tight.
>
> Yes I think I will put together a vise of sorts. Custom made to fit
> the transformer.
==========
Followed this thread with great interest .
Reason : I have an Astron RS-50A , 13.8V -50 Amperes unit for 220V-AC input which is buzzing heavily. Upon switch-on the group circuit breaker in the house sometimes trips due to the high switch-on current surge .
This can be overcome by adding a soft start circuit which initially puts a say 25 Ohms-50Watts resistor in series with the primary transformer winding ,shorting this resistor after a second or so.

However I fear that the main reason for the buzzing is that the transformer (of US origin) was designed for 60 Hz ,whereas here in the UK (like in all European countries ) the supply frequency is 50 Hz.
Can someone on this NG please confirm/reject my suspicion.

Another possible reason could be that the cabinet sheet metal which is very close to the transformer is vibrating (transducer effect) .

TIA for any constructive advice/opinion

Frank GM0CSZ / KN6WH

# 1656. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 14:12:13 UTC
From: jimmie68@gmail.com
Message-ID: <f0d84ffd-4125-4d53-b51a-dad8ff8892fe@d1g2000hsg.googlegroups.com>
Source record: 4143

On Oct 29, 8:21 am, Highland Ham <rfbu...@allbands.net> wrote:
> > The only big iron guys I know are now retired or dead.
> > And the companies I've dealt with that make that stuff
> > tend to have very little engineering staff, not much new
> > going on, (other than some efficiency improvements from
> > amorphous cores) they just crank out the product in cook
> > book fashion. I think nuances of it may soon be a lost.
>
> > Yes lams are going the way of the dinosuars. Maybe that's why they
> > cost so much looky the price of a good audio output transformer for a
> > tube audio amplifier and they go up to at least 20Khz.
>
> > Your other option is to figure out some clamping arrangement so that
> > the
> > laminations are held close and tight.
>
> > Yes I think I will put together a vise of sorts. Custom made to fit
> > the transformer.
>
> ==========
> Followed this thread with great interest .
> Reason : I have an Astron RS-50A , 13.8V -50 Amperes unit for 220V-AC
> input which is buzzing heavily. Upon switch-on the group circuit breaker
> in the house sometimes trips due to the high switch-on current surge .
> This can be overcome by adding a soft start circuit which initially puts
> a say 25 Ohms-50Watts resistor in series with the primary transformer
> winding ,shorting this resistor after a second or so.
>
> However I fear that the main reason for the buzzing is that the
> transformer (of US origin) was designed for 60 Hz ,whereas here in the
> UK (like in all European countries ) the supply frequency is 50 Hz.
> Can someone on this NG please confirm/reject my suspicion.
>
> Another possible reason could be that the cabinet sheet metal which is
> very close to the transformer is vibrating (transducer effect) .
>
> TIA for any constructive advice/opinion
>
> Frank GM0CSZ / KN6WH- Hide quoted text -
>
> - Show quoted text -

Frank I emailed XXXXXXX's address to you. He designed the Astron Power
supply.

Jimmie

# 1657. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 17:55:14 UTC
From: dplatt@radagast.org
Message-ID: <2lkmt5-8jv.ln1@radagast.org>
Source record: 4144

>However I fear that the main reason for the buzzing is that the
>transformer (of US origin) was designed for 60 Hz ,whereas here in the
>UK (like in all European countries ) the supply frequency is 50 Hz.
>Can someone on this NG please confirm/reject my suspicion.

I suspect that you are right.

If I recall correctly, transformers designed for 60 Hz can suffer from excessive quiescent current flow in the primary windings, if used on 50 Hz... the windings don't have enough inductance. Also, because the frequency is lower, the transformer will be drawing more current during the brief intervals (100 times per second) when the power supply rectifiers are conducting and recharging the filter capacitors... the abrupt changes in the current flow and the resulting magnetic-field changes may be causing the windings or laminations to move around and buzz.

Transformers designed for 50 Hz service generally work OK on 60 Hz... it an "easier" job for them.

Transformers can also buzz if there's anything on the same mains circuit which is generating harmonic currents (e.g. other linear power supplies). Toroidal tranformers can be prone to buzz or hum if other loads on the mains line are drawing current from the line in an asymmetrical fashion and thus creating a DC offset on the mains... the toroid goes into saturation.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

# 1658. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 20:43:59 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <jW3Ok.6303$be.3044@nlpi061.nbdc.sbc.com>
Source record: 4145

Do you have GloBar resistors in the UK? These are high cold and go lo
with current. they used to be very popular in TVs over here.

--
Thanks & 73
Hank WD5JFR
"Highland Ham" <rfburns@allbands.net> wrote in message
news:KO-dnRkE6o3_yJXUnZ2dnUVZ8uWdnZ2d@pipex.net...
>> The only big iron guys I know are now retired or dead.
>> And the companies I've dealt with that make that stuff
>> tend to have very little engineering staff, not much new
>> going on, (other than some efficiency improvements from
>> amorphous cores) they just crank out the product in cook
>> book fashion. I think nuances of it may soon be a lost.
>>
>> Yes lams are going the way of the dinosuars. Maybe that's why they
>> cost so much looky the price of a good audio output transformer for a
>> tube audio amplifier and they go up to at least 20Khz.
>>
>> Your other option is to figure out some clamping arrangement so that
>> the
>> laminations are held close and tight.
>>
>> Yes I think I will put together a vise of sorts. Custom made to fit
>> the transformer.
> ==============
> Followed this thread with great interest .
> Reason : I have an Astron RS-50A , 13.8V -50 Amperes unit for
> 220V-AC input which is buzzing heavily. Upon switch-on the group
> circuit breaker in the house sometimes trips due to the high switch-on
> current surge . This can be overcome by adding a soft start circuit
> which initially puts a say 25 Ohms-50Watts resistor in series with the
> primary transformer winding ,shorting this resistor after a second or
> so.
>
> However I fear that the main reason for the buzzing is that the
> transformer (of US origin) was designed for 60 Hz ,whereas here in the
> UK (like in all European countries ) the supply frequency is 50 Hz.
> Can someone on this NG please confirm/reject my suspicion.
>
> Another possible reason could be that the cabinet sheet metal which is
> very close to the transformer is vibrating (transducer effect) .
>
>

> TIA for any constructive advice/opinion
>
> Frank GM0CSZ / KN6WH
>

# 1659. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 22:57:48 UTC
From: jimmie68@gmail.com
Message-ID: <28603f74-7841-437e-a27b-d3984b5a8e63@64g2000hsm.googlegroups.com>
Source record: 4146

On Oct 29, 4:43 pm, "Henry Kolesnik" <koles...@nojunksbcglobal.net>
wrote:
> Do you have GloBar resistors in the UK?  These are high cold and go lo
> with current.  they used to be very popular in TVs over here.
>
> --
> Thanks & 73
> Hank WD5JFR"Highland Ham" <rfbu...@allbands.net> wrote in message
>
> news:KO-dnRkE6o3_yJXUnZ2dnUVZ8uWdnZ2d@pipex.net...
>
>
>
> >> The only big iron guys I know are now retired or dead.
> >> And the companies I've dealt with that make that stuff
> >> tend to have very little engineering staff, not much new
> >> going on, (other than some efficiency improvements from
> >> amorphous cores) they just crank out the product in cook
> >> book fashion. I think nuances of it may soon be a lost.
>
> >> Yes lams are going the way of the dinosuars. Maybe that's why they
> >> cost so much looky the price of a good audio output transformer for a
> >> tube audio amplifier and they go up to at least 20Khz.
>
> >> Your other option is to figure out some clamping arrangement so that
> >> the
> >> laminations are held close and tight.
>
> >> Yes I think I will put together a vise of sorts. Custom made to fit
> >> the transformer.
> > ==============
> > Followed this thread with great interest  .
> > Reason : I have an Astron RS-50A  , 13.8V -50 Amperes  unit  for
> > 220V-AC input which is buzzing heavily. Upon switch-on the group
> > circuit breaker in the house sometimes trips due to the high switch-on
> > current surge . This can be overcome by adding a soft start circuit
> > which initially puts a say 25 Ohms-50Watts resistor in series with the
> > primary transformer winding ,shorting this resistor after a second or
> > so.
>
> > However I fear that the main reason for the buzzing is that the
> > transformer (of US origin) was designed for 60 Hz ,whereas here in the
> > UK (like in all European countries ) the supply frequency is 50 Hz.
> > Can someone on this NG please confirm/reject my suspicion.

> 
> > Another possible reason could be that the cabinet sheet metal which is
> > very close to the transformer is vibrating (transducer effect) .
> 
> > TIA for any constructive advice/opinion
> 
> > Frank     GM0CSZ / KN6WH- Hide quoted text -
> 
> - Show quoted text -

I think some of the PC power supplies have a surge suppresor in them.
I you have some old power supplies around you coulld be in business.

Jimmie

# 1660. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 23:34:01 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <Cj6Ok.58709$De7.49043@bignews7.bellsouth.net>
Source record: 4147

Grumpy The Mule wrote:
> Uh! Sorry Ray, it was near 2AM and I misread this. Of course
> there's no gap in the core it's a linear AC transformer. No
> DC in the windings and so no gap.
>
> Usually I'd do everything I can to reduce any gap, inclduing
> interleaving the laminations, to reduce the magnetizing current.
>
> I just wasn't thinking, that happens sometimes.
>
>
> raypsi <RBorowiak@gmail.com> wrote in news:ea79280c-6148-42a5-be23-
> 33e848418174@n1g2000prb.googlegroups.com:
>
>> Shimmed the bobbin in the core window with some 1/8 thick
>> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
>> transformer and now is a 83watt buzzer / 157watt filament transformer.
>
Actually "transformers" that carry DC (IE: filter chokes) have a gap formed by putting ALL the "E"s in one direction and ALL the "I"'s in the other.

For transformers that carry SOME dc (audio output transformers) group the "E"'s and "I"s in bundles and assemble with a few groups of bundles going in opposing directions.

For transformers that carry ONLY dc (power, filament) alternate each lamination so no two in a row go the same way.

# 1661. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 23:34:59 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <wk6Ok.58710$De7.20670@bignews7.bellsouth.net>
Source record: 4148

ken scharf wrote:
> Grumpy The Mule wrote:
>> Uh! Sorry Ray, it was near 2AM and I misread this. Of course
>> there's no gap in the core it's a linear AC transformer. No
>> DC in the windings and so no gap.
>>
>> Usually I'd do everything I can to reduce any gap, inclduing
>> interleaving the laminations, to reduce the magnetizing current.
>>
>> I just wasn't thinking, that happens sometimes.
>>
>>
>> raypsi <RBorowiak@gmail.com> wrote in news:ea79280c-6148-42a5-be23-
>> 33e848418174@n1g2000prb.googlegroups.com:
>>
>>> Shimmed the bobbin in the core window with some 1/8 thick
>>> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
>>> transformer and now is a 83watt buzzer / 157watt filament transformer.
>>
> Actually "transformers" that carry DC (IE: filter chokes) have a gap
> formed by putting ALL the "E"s in one direction and ALL the "I"'s in the
> other.
>
> For transformers that carry SOME dc (audio output transformers) group
> the "E"'s and "I"s in bundles and assemble with a few groups of bundles
> going in opposing directions.
>
> For transformers that carry ONLY dc (power, filament) alternate each
> lamination so no two in a row go the same way.
I meant for transformers that carry ONLY AC! oops!

# 1662. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-29 23:57:35 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B46B6B45B74E2MDWN@194.177.96.78>
Source record: 4149

Yep, It's all about core saturation. A large utility
transformer can be saturated by just a few amperes
of DC. Which is one reason improvements in load current
THD are important. Zero sequence currents and all
that jazz.

ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in
news:wk6Ok.58710$De7.20670@bignews7.bellsouth.net:

> ken scharf wrote:
>> For transformers that carry ONLY dc (power, filament) alternate each
>> lamination so no two in a row go the same way.
> I meant for transformers that carry ONLY AC! oops!
>

# 1663. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-30 00:37:32 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B46BD79DEF452MDWN@194.177.96.78>
Source record: 4150

Howdy,

I think I would measure the line current with no load on the
transformer. Then let it idle a while, maybe three hours, then
give it the finger test. If it's not warm and the magnetizing
current is small, I'd then run it with a heavy load and check
it again. If it's not stinky hot (the winding is below about
110C more or less) I'd say it's OK at 50Hz and the breaker
tripping is from the inrush current.

There's some inrush current charging the core. That's not a
defect though, it's just how things work. The first half
cycle peak might be five or more times the peak magnetizing
current. The inrush current charging the capacitors is more
prolonged. Depending on the curve of the circuit breaker one
or both might be to blame.

So if the soft-start circuit works for you just monitor the
temperature of the transformer. If it's reasonable don't
worry. Then look elsewhere for the cause of the buzzing.
The cabinet sheet metal you should be able to quiet with
the palm of you hand...

Ok, here's one crazy idea. The inrush current is mostly
on the first half cycle so it's magnetizing something, maybe
the cabinet who knows what, which is then a more efficient
transducer. If you soft start it either doesn't magnetizing
the part or perhaps degausses it.

73

Highland Ham <rfburns@allbands.net> wrote in news:KO-
dnRkE6o3_yJXUnZ2dnUVZ8uWdnZ2d@pipex.net:

> ==============
> Followed this thread with great interest .
> Reason : I have an Astron RS-50A , 13.8V -50 Amperes unit for 220V-AC
> input which is buzzing heavily. Upon switch-on the group circuit breaker
> in the house sometimes trips due to the high switch-on current surge .
> This can be overcome by adding a soft start circuit which initially puts
> a say 25 Ohms-50Watts resistor in series with the primary transformer
> winding ,shorting this resistor after a second or so.
>
> However I fear that the main reason for the buzzing is that the
> transformer (of US origin) was designed for 60 Hz ,whereas here in the
> UK (like in all European countries ) the supply frequency is 50 Hz.

> Can someone on this NG please confirm/reject my suspicion.
>
> Another possible reason could be that the cabinet sheet metal which is
> very close to the transformer is vibrating (transducer effect) .
>
>
> TIA for any constructive advice/opinion
>
> Frank GM0CSZ / KN6WH
>

# 1664. Devil Or Angel Lucy Finds Out sexo

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-30 12:42:33 UTC
From: tyreemand@gmail.com
Message-ID: <b8314f07-ffd2-42dc-936e-bcff59a735e8@e2g2000hsh.googlegroups.com>
Source record: 4151
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

On a warm summer night last year, Lucy was walking alone on the side
of the road near a secluded ornamental park. http://sabir.servik.com/hardcore.htm
http://bdsm-big-tits.blogspot.com/ http://groups.google.com/group/salbon-lesbi

# 1665. Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-30 14:57:25 UTC
From: Philippe Signoret <philippe.signoret@gmail.com>
Message-ID: <915780b1-9cf5-4fb3-ab57-248fad2a73f3@j68g2000hsf.googlegroups.com>
Source record: 4152

Hello all.

I am trying to build a simple repeater system. This is how I have it set up:

Kenwood TK-7102 receives on on frequency #1 and is connected to Yaesu FT-1802 which transmits on frequency #2.

The Carrier Operated Relay output of the Kenwood is connected to the PTT input on the Yaesu. This works perfectly.

The problem is with the audio. I tried connecting the audio output to the Mic input on the Yaesu. The result is the audio with a horrible, high-pitched warble in the background. Any ideas?

I've tried connecting to different audio outputs that I can find in the service manual, but they all have the same problem.

Thanks!

Philippe Signoret

# 1666. Re: Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-30 21:40:36 UTC
From: jimmie68@gmail.com
Message-ID: <61917b9f-38f3-4e22-83cd-fc9547a91c70@d31g2000hsg.googlegroups.com>
Source record: 4153

On Oct 30, 10:57 am, Philippe Signoret <philippe.signo...@gmail.com>
wrote:
> Hello all.
>
> I am trying to build a simple repeater system. This is how I have it
> set up:
>
> Kenwood TK-7102 receives on on frequency #1 and is connected to Yaesu
> FT-1802 which transmits on frequency #2.
>
> The Carrier Operated Relay output of the Kenwood is connected to the
> PTT input on the Yaesu. This works perfectly.
>
> The problem is with the audio. I tried connecting the audio output to
> the Mic input on the Yaesu. The result is the audio with a horrible,
> high-pitched warble in the background. Any ideas?
>
> I've tried connecting to different audio outputs that I can find in
> the service manual, but they all have the same problem.
>
> Thanks!
>
> Philippe Signoret

You may have a ground loop problem. I suggest the use of an isolation
transformer between the transmitter and receiver. Also pay attention
to signal levels, an attenuator be may be required to achive the
proper audio input level to the transmitter.

Jimmie

# 1667. SMPS ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 00:50:45 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <GDsOk.6399$be.5349@nlpi061.nbdc.sbc.com>
Source record: 4154

Hey Ken & Grumpy
I started a new thread from the 7.5 VAC xfmr, because the subject has drifted. You guys mentioned a DC component in pole pigs. Sometime ago I heard that if an AC circuit had too many switching power supplies on it, that would cause the power company all kinds of problems. What were or are the problems and what was the evidence and what did the power companies do to solve the problem?

--
Thanks & 73
Hank WD5JFR

# 1668. Re: SMPS ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 05:19:09 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <7g4lg4phsg2olnde8uirrrietb8rv1hq0t@4ax.com>
Source record: 4155

On Thu, 30 Oct 2008 19:50:45 -0500, "Henry Kolesnik"
<kolesnik@nojunksbcglobal.net> wrote:

>Hey Ken & Grumpy
>I started a new thread from the 7.5 VAC xfmr, because the subject has
>drifted. You guys mentioned a DC component in pole pigs. Sometime ago
>I heard that if an AC circuit had too many switching power supplies on
>it, that would cause the power company all kinds of problems. What were
>or are the problems and what was the evidence and what did the power
>companies do to solve the problem?

There could be transformer core saturation problems if large half-wave
rectifier systems are used. In Europe old televisions had only a half
wave rectifier to generate the anode voltage for the tubes.
Fortunately, since the users would plug in their televisions both
ways, usually both half cycles were loaded within an area.

In a balanced three phase system the neutral current cancel out and
the neutral wire is loaded only then the phases are not equally
loaded. For this reason, the neutral wire is often smaller in large
underground cables.

Any full wave rectifier system generate strong odd harmonic currents
each time the capacitor is charged.

However, when each phase is loaded with switching mode power supplies,
which generate string 3rd harmonics, these harmonics do not cancel,
but instead the 3rd harmonic neutral currents from all three phases
add up, possibly overloading the neutral wire.

For this reason, at least in Europe, large power supplies must have a
power factor correction circuit to extend the conduction angle during
each half-cycle.

Paul OH3LWR

# 1669. Re: SMPS ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 06:15:51 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B482B1BA9592MDWN@194.177.96.78>
Source record: 4156

Howdy,

You're correct. The problem is mainly the result
of many single phase capacitor input power supplies
distributed across a three phase system.

In a capacitor input power supply, the line current
takes the form of narrow spikes, because the rectifiers
only conduct when the line voltage is higher than the
capacitor voltage. Many SMPS have a capacitor input
bulk supply at the front end. So the power factor is
low and there is much harmonic distortion which
includes triplens 3rd 6th 9th... harmonics. also called
zero sequence harmonics (they do not rotate.) As they
add in the neutral of a three-phase four wire system
difference between their half cycles is a DC component.
You can see that half-wave input would be the worst
as Paul mentioned.

The solution reduces THD and increases power factor.
For single phase input power supplies is either a
large inductor which causes the current to look more
like a rectangle. Or active PFC which is usually a
boost converter with no input capacitor and a control
circuit that causes the envelope of the current
pulses follows the shape of the line voltage. Most
often the active PFC is used but in low power supplies
I've seen the big inductor approach taken. There are
also other approaches like "valley fill" which force
current to be drawn when then line is less than
that needed to charge the capacitor. I don't see
these used much.

Before PFC was common this was a huge problem in places
with many crappy PC and VDT terminal power supplies (like
big office buildings full of VT100's.) Sometimes the
neutral conductor which was sized smaller than the phases
because they expect little imbalance would burn up.
Sometimes the DC component would saturate big transformers
and they would fry.

Triplens can be blocked by ungrounded-wye or delta
transformer connections which keeps them out of the rest
of the facility but they still do their dirty work on
the secondary side. So it's better to not draw distorted
line current. With three phase input power supplies

a simple boost converter without the PFC control circuit
improve the PF to about 0.96 and reduce the THD to eh,
maybe 25% or less. The current in phase leg will be
rectangular.

This explanation could be too simple. And as always
some of it might be wrong! But does it answer your
question?

73
Grumpy

"Henry Kolesnik" <kolesnik@nojunksbcglobal.net> wrote in
news:GDsOk.6399$be.5349@nlpi061.nbdc.sbc.com:

> Hey Ken & Grumpy
> I started a new thread from the 7.5 VAC xfmr, because the subject has
> drifted. You guys mentioned a DC component in pole pigs. Sometime ago
> I heard that if an AC circuit had too many switching power supplies on
> it, that would cause the power company all kinds of problems. What were
> or are the problems and what was the evidence and what did the power
> companies do to solve the problem?
>

# 1670. Re: SMPS ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 06:44:02 UTC
From: gsm@mendelson.com
Message-ID: <slrnggla82.onq.gsm@cable.mendelson.com>
Source record: 4157

Grumpy The Mule wrote:
> This explanation could be too simple. And as always
> some of it might be wrong! But does it answer your
> question?

Thanks for your answer and explanation. This leads me to ask,
"Is there anything WE (the consumer) can do about it and if so, what?"

Thanks,

Geoff.
--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

## 1671. Re: Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 06:51:25 UTC
From: Philippe Signoret <philippe.signoret@gmail.com>
Message-ID: <b34a78e9-d871-4fe1-8b92-893eabd4e21a@v13g2000pro.googlegroups.com>
Source record: 4158

> You may have a ground loop problem. I suggest the use of an isolation
> transformer between the transmitter and receiver. Also pay attention
> to signal levels, an attenuator be may be required to achive the
> proper audio input level to the transmitter.
>
> Jimmie

Thanks Jimmie. I'll check that and let you know. If I can, I'll run some tests at my university where I can use the oscilloscope. I'll be sure to get some images in case the transformer doesn't work.

Philippe

# 1672. Re: Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 14:50:57 UTC
From: Doug Smith <joe@somewhere.invalid>
Message-ID: <d5CdnRT6g57MhpbUnZ2dnUVZ_judnZ2d@earthlink.com>
Source record: 4159

On Thu, 30 Oct 2008 07:57:25 -0700, Philippe Signoret wrote:

> Hello all.
>
> I am trying to build a simple repeater system. This is how I have it set
> up:
>
> Kenwood TK-7102 receives on on frequency #1 and is connected to Yaesu
> FT-1802 which transmits on frequency #2.
>
> The Carrier Operated Relay output of the Kenwood is connected to the PTT
> input on the Yaesu. This works perfectly.
>
> The problem is with the audio. I tried connecting the audio output to
> the Mic input on the Yaesu. The result is the audio with a horrible,
> high-pitched warble in the background. Any ideas?

I would suggest the audio output level is way too high for the mic input of the Yaesu. Turning down the volume control on the Kenwood will bring down the level of the desired audio of the station being repeated, but there's probably some amount of inherent noise in the Kenwood's audio amplifier that isn't affected by the volume control. Since the Yaesu's audio input is far more sensitive than the Kenwood's speaker, you're hearing that noise.

A simple voltage divider would fix this. To toss out some values, maybe a 100-ohm resistor on the grounded side, in series with a 10,000-ohm resistor on the "hot" side, and tap the audio to the Yaesu across the 100-ohm resistor. I don't guarantee you it'll work but resistors are cheap & it's worth trying.

Do you have any method of ensuring the Yaesu won't get locked in transmit? (is there a timeout timer function?) Especially if you're using carrier squelch (not subtone), a spurious signal could leave the carrier-operated relay open and lock the Yaesu in transmit for a long time - possibly damaging the power amplifier. Not having a timeout may also be illegal in some countries.

--
/home/w9wi/.sig

# 1673. Re: Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 14:50:58 UTC
From: Doug Smith <joe@somewhere.invalid>
Message-ID: <NqadnThhq7zPhpbUnZ2dnUVZ_j6dnZ2d@earthlink.com>
Source record: 4160

On Thu, 30 Oct 2008 07:57:25 -0700, Philippe Signoret wrote:

> Hello all.
>
> I am trying to build a simple repeater system. This is how I have it set
> up:
>
> Kenwood TK-7102 receives on on frequency #1 and is connected to Yaesu
> FT-1802 which transmits on frequency #2.
>
> The Carrier Operated Relay output of the Kenwood is connected to the PTT
> input on the Yaesu. This works perfectly.
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> the Mic input on the Yaesu. The result is the audio with a horrible,
> high-pitched warble in the background. Any ideas?

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Do you have any method of ensuring the Yaesu won't get locked in transmit? (is there a timeout timer function?) Especially if you're using carrier squelch (not subtone), a spurious signal could leave the carrier-operated relay open and lock the Yaesu in transmit for a long time - possibly damaging the power amplifier. Not having a timeout may also be illegal in some countries.

--
/home/w9wi/.sig

# 1674. Re: SMPS ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 16:17:38 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B4868B926B7C2MDWN@194.177.96.78>
Source record: 4161

Howdy,

It's something to ponder. It appears there's not
much the individual consumer can do.

I suppose a person could direct their purchases toward
devices that don't add to the problem. Like buying
PC power supplies with PFC. Early CF bulbs were pretty
bad but they're better now, though incandescent bulbs
will likely always be better in this one regard. Some
thyristor controls are still horrible, like dimmers and
thermostats. But I didn't see how the consumer could know
this.

Being aware of the energy savings when considering the
price of a product is something the consumer can do.
If it doesn't make economic sense then Ok, don't buy it.
But consider the cost of ownership as well when making
the decision.

Working to have power factor, total harmonic distortion
and efficiency ratings required on the equipment name
plate along with volts, amperes and watts. Is something
individual consumers could do. Sometimes the industry
needs a little nudge.

Keeping equipment in good repair can help. We nearly
burned two taps off a 500KVA transformer at work. It
was installed improperly which took some time to discover
by way of insanely high THD under load. All that time
the transformer was burning up power heating the taps
and reducing efficiency of the equipment it supplied.
This applies to farms and homes as well. Might prevent
a fire as well.

From a ham perspective. Hmmm. perhaps build a PFC power
supply for that big linear amplifier! Or use a PFC battery
charger and run the shack off battery power

One last note, high PFC does not insure low THD but they
usually go hand-in-hand because of the methods employed.
A person could build a device to provide excellent PF and
crappy THD. I've never seen any product that does this
but it is possible.

I'm sorry I can't offer more or better suggestions.

73
Grumpy

gsm@mendelson.com (Geoffrey S. Mendelson) wrote in
news:slrnggla82.onq.gsm@cable.mendelson.com:

> Grumpy The Mule wrote:
>> This explanation could be too simple. And as always
>> some of it might be wrong! But does it answer your
>> question?
>
> Thanks for your answer and explanation. This leads me to ask,
> "Is there anything WE (the consumer) can do about it and if so, what?"
>
> Thanks,
>
> Geoff.

## 1675. Re: Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 17:52:50 UTC
From: JB <nospam@goofball.net>
Message-ID: <SBHOk.1707$Jv2.242@nwrddc01.gnilink.net>
Source record: 4162

There are small basic controller boards that you might find helpful for dealing with several issues.

Other issues to consider:

Think about a full time fan trained right on the PA and power supply and program TOT to 4 min max. in the FT.
Even then you may find your mobile getting way too hot even on the low power settings. Even to the point of melting solder. The heat may not travel fast enough from the device into the heat sink and build up when higher power levels are selected. This winds up heating up the board too much
Also note the transmitter is spec'd at a drifty 10ppm.

Possible RF energy from the transmitter getting into the RX audio and thus into the TX audio.

Hams actually put more stress on a repeater than commercial users.

http://infotech.awardspace.com/

# 1676. weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-10-31 23:47:28 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <6cednZmEO6M9F5bUnZ2dnUVZ_jidnZ2d@earthlink.com>
Source record: 4163

I was given this Weller soldering station. The display is not working. It does flash 888 on it when first turned on. The tip does heat up, but I have not determined if I can vary the heat or not. Also have an extra soldering pencle that plugs in it. Changed them to see if the display would light, but it didnot. Any hints on it ?

Also how do I open it up ? Screws under the 4 rubber feet ?

# 1677. Re: SMPS ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 02:09:41 UTC
From: jimmie68@gmail.com
Message-ID: <19ed4714-2415-4987-bfc1-0097ab785a67@v16g2000prc.googlegroups.com>
Source record: 4164

On Oct 31, 12:17 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> It's something to ponder.  It appears there's not
> much the individual consumer can do.
>
> I suppose a person could direct their purchases toward
> devices that don't add to the problem.  Like buying
> PC power supplies with PFC.  Early CF bulbs were pretty
> bad but they're better now, though incandescent bulbs
> will likely always be better in this one regard.  Some
> thyristor controls are still horrible, like dimmers and
> thermostats.  But I didn't see how the consumer could know
> this.
>
> Being aware of the energy savings when considering the
> price of a product is something the consumer can do.
> If it doesn't make economic sense then Ok, don't buy it.
> But consider the cost of ownership as well when making
> the decision.
>
> Working to have power factor, total harmonic distortion
> and efficiency ratings required on the equipment name
> plate along with volts, amperes and watts.  Is something
> individual consumers could do.  Sometimes the industry
> needs a little nudge.
>
> Keeping equipment in good repair can help.  We nearly
> burned two taps off a 500KVA transformer at work.  It
> was installed improperly which took some time to discover
> by way of insanely high THD under load.  All that time
> the transformer was burning up power heating the taps
> and reducing efficiency of the equipment it supplied.
> This applies to farms and homes as well.  Might prevent
> a fire as well.
>
> From a ham perspective.  Hmmm.  perhaps build a PFC power
> supply for that big linear amplifier!  Or use a PFC battery
> charger and run the shack off battery power
>
> One last note, high PFC does not insure low THD but they
> usually go hand-in-hand because of the methods employed.
> A person could build a device to provide excellent PF and
> crappy THD.  I've never seen any product that does this

> but it is possible.
>
> I'm sorry I can't offer more or better suggestions.
>
> 73
> Grumpy
>
> g...@mendelson.com (Geoffrey S. Mendelson) wrote
innews:slrnggla82.onq.gsm@cable.mendelson.com:
>
>
>
> > Grumpy The Mule wrote:
> >> This explanation could be too simple.  And as always
> >> some of it might be wrong!  But does it answer your
> >> question?
>
> > > Thanks for your answer and explanation. This leads me to ask,
> > > "Is there anything WE (the consumer) can do about it and if so, what?"
>
> > > Thanks,
>
> > > Geoff.- Hide quoted text -
>
> - Show quoted text -

PF and THD can be a real problem when you generate your own
electricity.
About three years ago we installed a new UPS at work that went crazy
whenever we switch from line to generator. The installers said we
would have to install a generator 4X as large as the one we have to
take care of the problem. Considering our present generator was a
120KW unit going to 500KW was out of the question. We measured the PF
and THD for the input to the UPS and it was ridiculously high but the
installers insisted this was normal for the size generator we had.
Long story short we kicked them and their UPS out and got a different
one that worked flawlessly with our equipment.

Jimmie

# 1678. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 05:44:41 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <490BECC9.3070005@NETTALLY.COM>
Source record: 4165

Ralph Mowery wrote:
> I was given this Weller soldering station. The display is not working. It
> does flash 888 on it when first turned on. The tip does heat up, but I have
> not determined if I can vary the heat or not. Also have an extra soldering
> pencle that plugs in it. Changed them to see if the display would light,
> but it didnot. Any hints on it ?
>
> Also how do I open it up ? Screws under the 4 rubber feet ?
>
>

I have same model unit with same exact problem. Yest it does regulate
the temperature. I haven't figured out the display problem either and
the thermistor in the iron seems to "ohm out" properly. Let me know what
you find. I never could find schematics for it. I used it just today on
a PIC project. Shame to throw it out, but I would like to read the
temperature.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1679. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 14:13:06 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <f86dnR2LktNu_pHUnZ2dnUVZ8sXinZ2d@pipex.net>
Source record: 4166

Henry Kolesnik wrote:
> Do you have GloBar resistors in the UK? These are high cold and go lo
> with current. they used to be very popular in TVs over here.
>
==========
Haven't come across these ,at least not under this name. I understand
they are Power NTC resistors .
Wonder if these would heat-up quickly enough within the 'start-up
period' to prevent a current surge.

In the meantime I have tested my Astron RS-50A PSU.
When switched on at 230 V AC (50hz) it sometimes trips the circuit
breaker and is rather heavily buzzing ,but when the voltage is increased
to that value from zero with a variac the buzzing level is lower .
No-load current is 0.69 Ampere , Power is 28 watts as measured with a
multifunction energy monitor.
Having had the unit running no-load for 1 day the buzzing level is
acceptable with the transformer being luke warm.

I now intend to include a simple soft start unit ( 12V relay with 1-2
seconds switch-on delay which shorts a series 50 Ohms-50W resistor (from
junk box) in the primary transformer winding line.

Comments on quality of unit :
-Insulation between primary and secondary winding of transformer looks
rather 'iffy'

- Output connection posts are of the type normally specified for 30
Amperes max.
I shall replace these by more heavy duty posts.

Having done that I intend to test the unit on rated capacity with 4
(approx 1 Ohm) resistors made of iron fencing wire , put in a bucket
with water.

Frank GM0CSZ / KN6WH

# 1680. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 17:01:34 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B49702AFCAB82MDWN@194.177.96.78>
Source record: 4167

Howdy,

An NTC (or two) should work well in the transformer primary.
It's a common means for reducing inrush at the input of SMPS.
Works fine for linear supplies too. There are numerous
manufacturers of these world wide.
http://www.rti-corp.com/Electronics/surggard.htm

Typical numbers for magnetizing current are 1-5% of the
rated load at steady state. And as much as 10-20 times
the load current for inrush. I stated 5 times for inrush
earlier. It's more than that for commodity (cheaply made)
type transformers.

You probably have some load on the transformer, bias power
for the regulator, bleeder resistors and so forth. So I'm
guessing the idling current is more than the magnetizing
current alone. If the transformer is designed for ~1KVA
50A*13.6V times some factor for the regulator efficiency
say 0.7 at full load, that's about 970W, then 28W loss at
no load isn't unreasonably high assuming the core loss equals
the copper loss at full load.

The iffy insulation is a good argument for having the
output return of the power supply securely bonded to
earth ground.

Fence wire in water should make an excellent load. I've
never heard of anyone testing an RS-50 at full load.
You might want to sneak up on it. A working 25A supply
is better than a dead 50A supply!

73
Grumpy

Highland Ham <rfburns@allbands.net> wrote in
news:f86dnR2LktNu_pHUnZ2dnUVZ8sXinZ2d@pipex.net:

> ====================================
> Haven't come across these ,at least not under this name. I understand
> they are Power NTC resistors .
> Wonder if these would heat-up quickly enough within the 'start-up
> period' to prevent a current surge.
>
> In the meantime I have tested my Astron RS-50A PSU.
> When switched on at 230 V AC (50hz) it sometimes trips the circuit
> breaker and is rather heavily buzzing ,but when the voltage is increased

> to that value from zero with a variac the buzzing level is lower .
> No-load current is 0.69 Ampere , Power is 28 watts as measured with a
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> acceptable with the transformer being luke warm.
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> seconds switch-on delay which shorts a series 50 Ohms-50W resistor (from
> junk box) in the primary transformer winding line.
>
> Comments on quality of unit :
> -Insulation between primary and secondary winding of transformer looks
> rather 'iffy'
>
> - Output connection posts are of the type normally specified for 30
> Amperes max.
> I shall replace these by more heavy duty posts.
>
> Having done that I intend to test the unit on rated capacity with 4
> (approx 1 Ohm) resistors made of iron fencing wire , put in a bucket
> with water.
>
> Frank GM0CSZ / KN6WH
>

# 1681. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 17:31:22 UTC
From: Jim Higgins <invalid@invalid.invalid>
Message-ID: <c64pg49chk0hm2kr1l60kc1o46tt228qf0@4ax.com>
Source record: 4168

On Tue, 28 Oct 2008 00:52:28 +0100 (CET), Grumpy The Mule
<s_foonly@foo.bar> wrote:

>Hmmm!
>
>Bolts through the laminations should have insulators
>(usually fiber board washers) under the heads. Just
>one end will do, there's no need for them under the
>nuts. But shoulder washers are best so the bolts don't
>short any laminations together deeper into the core.
>
>If uninsulated the bolt can form a poorly coupled shorted
>turn and that in itself can cause noise, heating of the
>core and the hardware as well as spray flux around where
>you wouldn't have expected any. How bad it is depends
>on the locations of the holes in the core.
>
>A bead of weld across the ends of the laminations won't add
>to the eddy currents significantly. Steel isn't a great
>conductor. The weld's cross section is small and it's very
>poorly coupled to the primary.
>
>Why would a weld across the laminations let line spikes
>though?

It's not just the laminations that make noise. The windings can
vibrate if they're not locked in place with transformer varnish or
epoxy. No amount of tightening the laminations will help if the
windings are free to vibrate. This is probably more likely in larger
higher power transformers (multiple kW) than in a filament or screen
supply transformer, but it can happen.

Also, depending on how much magnetic leakage your core has you can
couple to the steel walls of the cabinetry the transformer is housed
in if you don't maintain adequate spacing from the walls, in which
case the steel wall and the transformer can vibrate and make noise
even though no parts on the transformer are loose.

# 1682. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 21:10:44 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B499A6AC3192MDWN@194.177.96.78>
Source record: 4169

That's a good point. The filthy leakge inductance will be
spraying its flux all about. But there are things we can
do a to contain it.

A belly band around the winding (but not though the core) helps.
End bells (covers) bolted down over the windows work too.

There may also be fringing flux spewing out of the unavoidable
gaps if it's a butt stack lamination core. Interleaving the
laminations will help.

I've done all of that on a design with the transformer mounted
directly beneath the neck of the CRT in a video terminal.
A requirment of the project manager because he feared
SMPS noise and demanded a linear power supply. Of course
everything had to be jammed into the smallest possible
enclosure and a mu metal shield was deemed too expensive :P

Jim Higgins <invalid@invalid.invalid> wrote in
news:c64pg49chk0hm2kr1l60kc1o46tt228qf0@4ax.com:

> It's not just the laminations that make noise. The windings can
> vibrate if they're not locked in place with transformer varnish or
> epoxy. No amount of tightening the laminations will help if the
> windings are free to vibrate. This is probably more likely in larger
> higher power transformers (multiple kW) than in a filament or screen
> supply transformer, but it can happen.
>
> Also, depending on how much magnetic leakage your core has you can
> couple to the steel walls of the cabinetry the transformer is housed
> in if you don't maintain adequate spacing from the walls, in which
> case the steel wall and the transformer can vibrate and make noise
> even though no parts on the transformer are loose.
>
>

# 1683. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 21:23:13 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B499C88C85BC2MDWN@194.177.96.78>
Source record: 4170

I think something is getting hung during the self-test. It should flash 888 for two seconds at start-up. The sensor is a platinum RTD. Pretty fancy for a soldering iron! Too bad this model has earned a reputation for being unreliable.

There's a "tech sheet" with trouble shooting info but I've never found it online.

We had one of these irons at work and replaced it with a WTCP station.

RFI-EMI-GUY <Rhyolite@NETTALLY.COM> wrote in news:490BECC9.3070005@NETTALLY.COM:

> I have same model unit with same exact problem. Yest it does regulate
> the temperature. I haven't figured out the display problem either and
> the thermistor in the iron seems to "ohm out" properly. Let me know
> what you find. I never could find schematics for it. I used it just
> today on a PIC project. Shame to throw it out, but I would like to
> read the temperature.

# 1684. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-01 22:30:23 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0811012226080.27995@sdf.lonestar.org>
Source record: 4171

On Thu, 30 Oct 2008, Grumpy The Mule wrote:

> Date: Thu, 30 Oct 2008 01:37:32 +0100 (CET)
> From: Grumpy The Mule <s_foonly@foo.bar>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz
>
>
> Howdy,
>
> I think I would measure the line current with no load on the
> transformer. Then let it idle a while, maybe three hours, then
> give it the finger test. If it's not warm and the magnetizing
> current is small, I'd then run it with a heavy load and check
> it again. If it's not stinky hot (the winding is below about
> 110C more or less) I'd say it's OK at 50Hz and the breaker
> tripping is from the inrush current.
>
> There's some inrush current charging the core.

Don't forget that the inrush current is also going into at least one and
maybe two high capacity electrolytic capacitors that, instantaneously
before initial charging are going to look like zero ohms. Peak current, at
say peak AC volatage when the on switch is turned on, is going to be
higher than you think.

The manufaturers are just too cheap to put any kind of Soft-start
circuitry in to limit this inrush.

That's not a
> defect though, it's just how things work. The first half
> cycle peak might be five or more times the peak magnetizing
> current. The inrush current charging the capacitors is more
> prolonged. Depending on the curve of the circuit breaker one
> or both might be to blame.
>
> So if the soft-start circuit works for you just monitor the
> temperature of the transformer. If it's reasonable don't
> worry. Then look elsewhere for the cause of the buzzing.
> The cabinet sheet metal you should be able to quiet with
> the palm of you hand...
>
> Ok, here's one crazy idea. The inrush current is mostly
> on the first half cycle so it's magnetizing something, maybe
> the cabinet who knows what, which is then a more efficient

> transducer. If you soft start it either doesn't magnetizing
> the part or perhaps degausses it.
>
>
> 73
>
>
> Highland Ham <rfburns@allbands.net> wrote in news:KO-
> dnRkE6o3_yJXUnZ2dnUVZ8uWdnZ2d@pipex.net:
>
>> ==============
>> Followed this thread with great interest .
>> Reason : I have an Astron RS-50A , 13.8V -50 Amperes unit for 220V-AC
>> input which is buzzing heavily. Upon switch-on the group circuit breaker
>> in the house sometimes trips due to the high switch-on current surge .
>> This can be overcome by adding a soft start circuit which initially puts
>> a say 25 Ohms-50Watts resistor in series with the primary transformer
>> winding ,shorting this resistor after a second or so.
>>
>> However I fear that the main reason for the buzzing is that the
>> transformer (of US origin) was designed for 60 Hz ,whereas here in the
>> UK (like in all European countries ) the supply frequency is 50 Hz.
>> Can someone on this NG please confirm/reject my suspicion.
>>
>> Another possible reason could be that the cabinet sheet metal which is
>> very close to the transformer is vibrating (transducer effect) .
>>
>>
>> TIA for any constructive advice/opinion
>>
>> Frank GM0CSZ / KN6WH
>>
>
>

# 1685. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-02 03:04:44 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <OfudnYjf-9jDI5DUnZ2dnUVZ_tXinZ2d@earthlink.com>
Source record: 4172

"RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
news:490BECC9.3070005@NETTALLY.COM...
> I have same model unit with same exact problem. Yest it does regulate the
> temperature. I haven't figured out the display problem either and the
> thermistor in the iron seems to "ohm out" properly. Let me know what you
> find. I never could find schematics for it. I used it just today on a PIC
> project. Shame to throw it out, but I would like to read the temperature.
>
> --
> Joe Leikhim K4SAT

I found several schematics for different models. Never did find the one
that matches mine. I opened it up and it seems there is a ceramic board
with surface devices on it. Almost no user replicable parts. Atleast for
my skill level. I was hoping it would be the discrete parts. I can work
with them. Oh well, it was free and is a good soldering iron even without
the display. I do have a couple of spare parts for it also.

de KU4PT

# 1686. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-02 09:12:49 UTC
From: charrid <richfur@gmail.com>
Message-ID: <7ac61248-af73-4756-bb8c-521aed9fb5eb@e38g2000prn.googlegroups.com>
Source record: 4173

On Oct 29, 1:21 pm, Highland Ham <rfbu...@allbands.net> wrote:

> However I fear that the main reason for the buzzing is that the
> transformer (of US origin) was designed for 60 Hz ,whereas here in the
> UK (like in all European countries ) the supply frequency is 50 Hz.
> Can someone on this NG please confirm/reject my suspicion.
>
> Another possible reason could be that the cabinet sheet metal which is
> very close to the transformer is vibrating (transducer effect) .
>
> TIA for any constructive advice/opinion
>
> Frank     GM0CSZ / KN6WH

I can confirm the 50/60Hz problem. Have been moving line powered equipment (including microwave ovens, Astron P/S, and more - even real Wahl hair clipper) between US/Canada and Europe for over 10 years and found the increased level of buzz when running 60Hz eqpt on 50Hz in practically all cases. My Astron P/S is just a 4A unit and the buzz is bearable. Other stuff ranges from OK to loud like hell.

73,
Rich OK8RF/VE3FSF

# 1687. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-02 19:43:53 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <95c53136-a7b1-4293-aeb2-225e0024a77c@40g2000prx.googlegroups.com>
Source record: 4174

On Oct 25, 12:25 pm, raypsi <RBorow...@gmail.com> wrote:
> Hey all:
>
> I tore down a transformer I got from ebay it was a Zenith TV power
> transformer from days gone by. Re wound it with 17AWG wire on the
> secondary and primary. It powers up my 4-1000A filament nicely with
> 7.25VAC from 120VAC mains. I used a penta-filar winding on the
> secondary. Shimmed the bobbin in the core window with some 1/8 thick
> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
> transformer and now is a 83watt buzzer / 157watt filament transformer.
>
> So what is the cheapest I can gits away with sealing these laminations
> from buzzing, I used up all my epoxy sealing the windings.
>
> 73
>
> n8zu

I finally got around to clamping the transformer down with grade 8,
1/4inch bolts and nuts That didn't help, luckily I found my 3 hour
epoxy, ran the transformer for 3 hours straight to heat it up, took
the bolts out and with a putty knife slapped on some microwave heated
epoxy on the lams. That took the buzz down to below the level of the
fan noise. In dead silence you can still hear it. Nowhere can you feel
the buzz.

73

n8zu

# 1688. RF PA Module data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-03 11:01:52 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <98ednWq23eC8R5PUnZ2dnUVZ_g6dnZ2d@bright.net>
Source record: 4175

I'm using a Mitsubishi M67749M in my 432 MHz beacon. The only datasheet I can find at RF Parts shows maximum parameters, etc. There are no charts showing output power versus such things as Vcc1, Vcc2, Vbb and input power. Does anyone have the charts for this module?

If you do and can make an educated guess from looking at the various charts as to what my output power will be?

I have it set up as follows:
Vcc1 = +5V
Vbb = +5V
Vcc2 = +13.6V
RF Input = 20 mW (+13 dBm)

My real question is will I get much output power with only +5V on Vcc1 or should I just tie it to +13.6V just as Vcc2?

THANKS!!

Scott
N0EDV

# 1689. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-03 14:15:23 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <cOCPk.7521$kd5.6503@newsfe01.iad>
Source record: 4176

I used to work for a company (ARCO Oil) that used a bunch of those. Weller closely guarded their schematics and even now they will not release them. We sent them in for repair but they charged about as much as to buy a new one. Here is what I found over fixing a dozen or so.
1) The wire nuts came loose inside
2) Intermittent wires in the cable going to the soldering iron. Flex the cable while ohming end to end.
3) The surface mount electrolytics go bad. These were MOST of the failures and I ended up changing all of them in the rest of the 25 irons we used over about 3 years.
4) The cheap temperature set wire wound pot gets worn out.

Most of the parts in this unit are consumer rated parts and are available. Never had any problems with the ceramic boards in the units or with the printed resistors on them. Had a couple of chips fail. It's an A to D with a seven segment driver built in. They are available still.

Other than the above, they are really a darn good soldering iron and keep the tip temperature regulated fairly closely.

I still have 2 of them so if you decide to throw them away, send them to me and I can use them for parts to keep mine in repair. I will reimburse you for your shipping.

I have more info If you need it.

Rich Klesstinez
3728 Crestline Rd
Fort Worth Tx 76107

Email:
(my name, lower case, no spaces) at charter (dot) net

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:OfudnYjf-9jDl5DUnZ2dnUVZ_tXinZ2d@earthlink.com...
>
> "RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
> news:490BECC9.3070005@NETTALLY.COM...
>> I have same model unit with same exact problem. Yest it does regulate the
>> temperature. I haven't figured out the display problem either and the
>> thermistor in the iron seems to "ohm out" properly. Let me know what you
>> find. I never could find schematics for it. I used it just today on a PIC
>> project. Shame to throw it out, but I would like to read the temperature.
>>
>> --
>> Joe Leikhim K4SAT

>
> I found several schematics for different models. Never did find the one
> that matches mine. I opened it up and it seems there is a ceramic board
> with surface devices on it. Almost no user replicable parts. Atleast for
> my skill level. I was hoping it would be the discrete parts. I can work
> with them. Oh well, it was free and is a good soldering iron even without
> the display. I do have a couple of spare parts for it also.
>
> de KU4PT
>
>

# 1690. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-03 14:47:37 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <490F0F09.50005@NETTALLY.COM>
Source record: 4177

Rich Klestinez wrote:
> I used to work for a company (ARCO Oil) that used a bunch of those. Weller
> closely guarded their schematics and even now they will not release them.
> We sent them in for repair but they charged about as much as to buy a new
> one. Here is what I found over fixing a dozen or so.
> 1) The wire nuts came loose inside
> 2) Intermittent wires in the cable going to the soldering iron. Flex the
> cable while ohming end to end.
> 3) The surface mount electrolytics go bad. These were MOST of the failures
> and I ended up changing all of them in the rest of the 25 irons we
> used over about 3 years.
> 4) The cheap temperature set wire wound pot gets worn out.
>
> Most of the parts in this unit are consumer rated parts and are available.
> Never had any problems with the ceramic boards in the units or with the
> printed resistors on them. Had a couple of chips fail. It's an A to D with
> a seven segment driver built in. They are available still.
>
> Other than the above, they are really a darn good soldering iron and keep
> the tip temperature regulated fairly closely.
>
> I still have 2 of them so if you decide to throw them away, send them to me
> and I can use them for parts to keep mine in repair. I will reimburse you
> for your shipping.
>
> I have more info If you need it.
>
> Rich Klesstinez
> 3728 Crestline Rd
> Fort Worth Tx 76107
>
> Email:
> (my name, lower case, no spaces) at charter (dot) net
>
>
>
> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
> news:OfudnYjf-9jDl5DUnZ2dnUVZ_tXinZ2d@earthlink.com...
>> "RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
>> news:490BECC9.3070005@NETTALLY.COM...
>>> I have same model unit with same exact problem. Yest it does regulate the
>>> temperature. I haven't figured out the display problem either and the
>>> thermistor in the iron seems to "ohm out" properly. Let me know what you
>>> find. I never could find schematics for it. I used it just today on a PIC

>>> project. Shame to throw it out, but I would like to read the temperature.
>>>
>>> --
>>> Joe Leikhim K4SAT
>> I found several schematics for different models. Never did find the one
>> that matches mine. I opened it up and it seems there is a ceramic board
>> with surface devices on it. Almost no user replicable parts. Atleast for
>> my skill level. I was hoping it would be the discrete parts. I can work
>> with them. Oh well, it was free and is a good soldering iron even without
>> the display. I do have a couple of spare parts for it also.
>>
>> de KU4PT
>>
>>
>
>

Rich;
Since the temperature control on mine seems to be working can I assume the variable pot, the Iron cable and the Iron thermistor are OK? Mine flashes "EEE" on turn on and then the display goes blank. There are a number of leaded capacitors on the display board (Mine is actually an older model 2002-A version). I will try "shotgunning" a;; of the capacitors with new ones and keep you in mind for the disposal if I buy a replacement.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1691. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-03 20:21:12 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <E1JPk.57382$f_7.39830@newsfe01.iad>
Source record: 4178

Joe: The ones that I have. One board is with the distplays on it has a couple of regular caps. The other board is ceramic and it had all surface mount parts. The ceramic board is the one that seems to always give me the problems. Anyway give it a try.
rich

"RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
news:490F0F09.50005@NETTALLY.COM...
> Rich Klestinez wrote:
>> I used to work for a company (ARCO Oil) that used a bunch of those.
>> Weller closely guarded their schematics and even now they will not
>> release them. We sent them in for repair but they charged about as much
>> as to buy a new one. Here is what I found over fixing a dozen or so.
>> 1) The wire nuts came loose inside
>> 2) Intermittent wires in the cable going to the soldering iron. Flex the
>> cable while ohming end to end.
>> 3) The surface mount electrolytics go bad. These were MOST of the
>> failures and I ended up changing all of them in the rest of the
>> 25 irons we used over about 3 years.
>> 4) The cheap temperature set wire wound pot gets worn out.
>>
>> Most of the parts in this unit are consumer rated parts and are
>> available. Never had any problems with the ceramic boards in the units or
>> with the printed resistors on them. Had a couple of chips fail. It's an
>> A to D with a seven segment driver built in. They are available still.
>>
>> Other than the above, they are really a darn good soldering iron and keep
>> the tip temperature regulated fairly closely.
>>
>> I still have 2 of them so if you decide to throw them away, send them to
>> me and I can use them for parts to keep mine in repair. I will reimburse
>> you for your shipping.
>>
>> I have more info If you need it.
>>
>> Rich Klesstinez
>> 3728 Crestline Rd
>> Fort Worth Tx 76107
>>
>> Email:
>> (my name, lower case, no spaces) at charter (dot) net
>>
>>
>>

>> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
>> news:OfudnYjf-9jDl5DUnZ2dnUVZ_tXinZ2d@earthlink.com...
>>> "RFI-EMI-GUY" <Rhyolite@NETTALLY.COM> wrote in message
>>> news:490BECC9.3070005@NETTALLY.COM...
>>>> I have same model unit with same exact problem. Yest it does regulate
>>>> the temperature. I haven't figured out the display problem either and
>>>> the thermistor in the iron seems to "ohm out" properly. Let me know
>>>> what you find. I never could find schematics for it. I used it just
>>>> today on a PIC project. Shame to throw it out, but I would like to read
>>>> the temperature.
>>>>
>>>> --
>>>> Joe Leikhim K4SAT
>>> I found several schematics for different models. Never did find the one
>>> that matches mine. I opened it up and it seems there is a ceramic board
>>> with surface devices on it. Almost no user replicable parts. Atleast
>>> for my skill level. I was hoping it would be the discrete parts. I can
>>> work with them. Oh well, it was free and is a good soldering iron even
>>> without the display. I do have a couple of spare parts for it also.
>>>
>>> de KU4PT
>>>
>>>
>>
>>
>
> Rich;
> Since the temperature control on mine seems to be working can I assume the
> variable pot, the Iron cable and the Iron thermistor are OK? Mine flashes
> "EEE" on turn on and then the display goes blank. There are a number of
> leaded capacitors on the display board (Mine is actually an older model
> 2002-A version). I will try "shotgunning" a;; of the capacitors with new
> ones and keep you in mind for the disposal if I buy a replacement.
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"
>
> "Treason doth never prosper: what's the reason?
> For if it prosper, none dare call it treason."
>
> "Follow The Money" ;-P

# 1692. Re: eBay's Top 10 Transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-03 21:15:32 UTC
From: Victoryleo <VictoryleoX@aol.com>
Message-ID: <2fe7ae4f-e95b-4af6-ac18-240bd91340fb@b31g2000prb.googlegroups.com>
Source record: 4179
Cross-posted to: misc.industry.electronics.marketplace,alt.toys.transformers,rec.antiques.radio+phono,rec.radio.amateur.homebrew,sci.electronics.components

Those ebay top 10 list changes more than a few times per day. also TF top 10 ebay list are tailored based on what a active ebay member buys & sell on ebay.

# 1693. Re: Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-03 23:50:02 UTC
From: Philippe Signoret <philippe.signoret@gmail.com>
Message-ID: <35047e3e-b206-4ca7-b0e0-5a39fe3deea6@b2g2000prf.googlegroups.com>
Source record: 4180

On Oct 31, 11:52 am, "JB" <nos...@goofball.net> wrote:
> There are small basic controller boards that you might find helpful for
> dealing with several issues.
>
> Other issues to consider:
>
> Think about a full time fan trained right on the PA and power supply and
> program TOT to 4 min max. in the FT.
> Even then you may find your mobile getting way too hot even on the low power
> settings.  Even to the point of melting solder.   The heat may not travel
> fast enough from the device into the heat sink and build up when higher
> power levels are selected.  This winds up heating up the board too much
> Also note the transmitter is spec'd at a drifty 10ppm.
>
> Possible RF energy from the transmitter getting into the RX audio and thus
> into the TX audio.
>
> Hams actually put more stress on a repeater than commercial users.
>
> http://infotech.awardspace.com/

Thanks. I still haven't had a chance to see if any of these
suggestions fix the problem, but I'll let you know.

The repeater will be used sparingly only during weekends, I don't
think I should have a heat problem. Either way, I do intend on using a
fan.

Thanks!
Philippe

# 1694. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 00:17:26 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <Kdidnd9sQvekCZLUnZ2dnUVZ_hudnZ2d@earthlink.com>
Source record: 4181

"Rich Klestinez" <replytogroup@noplace.cc> wrote in message
news:cOCPk.7521$kd5.6503@newsfe01.iad...
>I used to work for a company (ARCO Oil) that used a bunch of those. Weller
>closely guarded their schematics and even now they will not release them.
>We sent them in for repair but they charged about as much as to buy a new
>one. Here is what I found over fixing a dozen or so.
> 1) The wire nuts came loose inside
> 2) Intermittent wires in the cable going to the soldering iron. Flex the
> cable while ohming end to end.
> 3) The surface mount electrolytics go bad. These were MOST of the
> failures and I ended up changing all of them in the rest of the 25
> irons we used over about 3 years.
> 4) The cheap temperature set wire wound pot gets worn out.
>
> Most of the parts in this unit are consumer rated parts and are available.
> Never had any problems with the ceramic boards in the units or with the
> printed resistors on them. Had a couple of chips fail. It's an A to D
> with a seven segment driver built in. They are available still.
>
> Other than the above, they are really a darn good soldering iron and keep
> the tip temperature regulated fairly closely.
>
> I still have 2 of them so if you decide to throw them away, send them to
> me and I can use them for parts to keep mine in repair. I will reimburse
> you for your shipping.
>
> I have more info If you need it.
>
> Rich Klesstinez
> 3728 Crestline Rd
> Fort Worth Tx 76107
>
> Email:
> (my name, lower case, no spaces) at charter (dot) net
>

Thanks for the reply. I will probably keep the soldering station. It seems
to work fine, just no display. Weller made another modle that seemed to be
the same unit without the display. I guess that if Weller did repair them,
they probably just changed out the controller board. Similar to what the
Commador computer people did. They had a flat repair rate. Don;t recall
exectally,but it was something like the board cost them $ 50 and they
charged about $ 70 to repair the computer. All they did was throw away the
old insides and replace them. Seems this way is cheeper than the labor to

repair them.

## 1695. eBay: Meters & panel for linear or repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 02:45:19 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <2HOPk.5523$x%.2429@nlpi070.nbdc.sbc.com>
Source record: 4182

http://search.ebay.com/_W0QQsassZwd5jfrQQfrppZ50QQfsopZ32QQfsooZ2QQrdZ0

# 1696. Re: RF PA Module data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 02:52:47 UTC
From: PhattyMo <phattymo@not.net>
Message-ID: <490fb8f2$0$89395$815e3792@news.qwest.net>
Source record: 4183

I would leave Vcc1 and Vbb(bias,I'm assuming?) connected to +5V,to avoid
frying the module.

Scott wrote:
> I'm using a Mitsubishi M67749M in my 432 MHz beacon. The only datasheet
> I can find at RF Parts shows maximum parameters, etc. There are no
> charts showing output power versus such things as Vcc1, Vcc2, Vbb and
> input power. Does anyone have the charts for this module?
>
> If you do and can make an educated guess from looking at the various
> charts as to what my output power will be?
>
> I have it set up as follows:
> Vcc1 = +5V
> Vbb = +5V
> Vcc2 = +13.6V
> RF Input = 20 mW (+13 dBm)
>
> My real question is will I get much output power with only +5V on Vcc1
> or should I just tie it to +13.6V just as Vcc2?
>
> THANKS!!
>
> Scott
> N0EDV

# 1697. Re: I built a 7.5VAC 21Amp transformer now it has lots of buzz

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 03:06:29 UTC
From: Henry Kolesnik <kolesnik@nojunksbcglobal.net>
Message-ID: <U_OPk.5525$x%.1890@nlpi070.nbdc.sbc.com>
Source record: 4184

congrats on the fix..
now you have th epower and the time to contest..
Contesting is much like transformer winding..
Once you learn how to do one turn, you repeat and count until you reach
a goal...
In contesting you do one turn, then another till you reach the time
limit and count your turns.
hi hi
Hank
"raypsi" <RBorowiak@gmail.com> wrote in message
news:95c53136-a7b1-4293-aeb2-225e0024a77c@40g2000prx.googlegroups.com...
> On Oct 25, 12:25 pm, raypsi <RBorow...@gmail.com> wrote:
>> Hey all:
>>
>> I tore down a transformer I got from ebay it was a Zenith TV power
>> transformer from days gone by. Re wound it with 17AWG wire on the
>> secondary and primary. It powers up my 4-1000A filament nicely with
>> 7.25VAC from 120VAC mains. I used a penta-filar winding on the
>> secondary. Shimmed the bobbin in the core window with some 1/8
>> thick
>> virgin teflon. Epoxied the windings to the bobbin. This was a 240VA
>> transformer and now is a 83watt buzzer / 157watt filament
>> transformer.
>>
>> So what is the cheapest I can gits away with sealing these
>> laminations
>> from buzzing, I used up all my epoxy sealing the windings.
>>
>> 73
>>
>> n8zu
>
> I finally got around to clamping the transformer down with grade 8,
> 1/4inch bolts and nuts That didn't help, luckily I found my 3 hour
> epoxy, ran the transformer for 3 hours straight to heat it up, took
> the bolts out and with a putty knife slapped on some microwave heated
> epoxy on the lams. That took the buzz down to below the level of the
> fan noise. In dead silence you can still hear it. Nowhere can you feel
> the buzz.
>
> 73
>
> n8zu

## 1698. Re: Building a repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 03:16:01 UTC
From: JB <nospam@goofball.net>
Message-ID: <R7PPk.2717$Jv2.1785@nwrddc01.gnilink.net>
Source record: 4185

The repeater will be used sparingly only during weekends, I don't think I should have a heat problem. Either way, I do intend on using a fan.

We live and we learn.

# 1699. Blonde and brunette sweeties enjoy sharing one very strong chocolate shaft

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 07:33:52 UTC
From: tyreemand@gmail.com
Message-ID: <38b83f30-b842-498e-ae74-4ba93d670be4@40g2000prx.googlegroups.com>
Source record: 4186
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://chocolate.withsex.com/ Blonde and brunette sweeties enjoy
sharing one very strong chocolate shaft http://chocolate.withsex.com/

# 1700. Update: Re: RF PA Module data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 11:42:48 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <IaednYTi9_-nqI3UnZ2dnUVZ_rfinZ2d@bright.net>
Source record: 4187

PhattyMo wrote:

> I would leave Vcc1 and Vbb(bias,I'm assuming?) connected to +5V,to avoid
> frying the module.
>
> Scott wrote:
>
>> I'm using a Mitsubishi M67749M in my 432 MHz beacon. The only
>> datasheet I can find at RF Parts shows maximum parameters, etc. There
>> are no charts showing output power versus such things as Vcc1, Vcc2,
>> Vbb and input power. Does anyone have the charts for this module?
>>
>> If you do and can make an educated guess from looking at the various
>> charts as to what my output power will be?
>>
>> I have it set up as follows:
>> Vcc1 = +5V
>> Vbb = +5V
>> Vcc2 = +13.6V
>> RF Input = 20 mW (+13 dBm)
>>
>> My real question is will I get much output power with only +5V on Vcc1
>> or should I just tie it to +13.6V just as Vcc2?
>>
>> THANKS!!
>>
>> Scott
>> N0EDV
>
>
>
With Vcc1 at 5V, I get 6.8 Watts out during testing. It appears I will
actually need to lower Vcc1 just a bit to get down to my desired 4
Watts. Thanks for the note!

Scott
N0EDV

# 1701. Re: Update: Re: RF PA Module data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 12:24:11 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <AZ6dnWsDXdNlo43UnZ2dnUVZ8uqdnZ2d@pipex.net>
Source record: 4188

Scott wrote:
> PhattyMo wrote:
>
>> I would leave Vcc1 and Vbb(bias,I'm assuming?) connected to +5V,to
>> avoid frying the module.
>>
>> Scott wrote:
>>
>>> I'm using a Mitsubishi M67749M in my 432 MHz beacon. The only
>>> datasheet I can find at RF Parts shows maximum parameters, etc.
>>> There are no charts showing output power versus such things as Vcc1,
>>> Vcc2, Vbb and input power. Does anyone have the charts for this module?
>>>
>>> If you do and can make an educated guess from looking at the various
>>> charts as to what my output power will be?
>>>
>>> I have it set up as follows:
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>>> Vcc2 = +13.6V
>>> RF Input = 20 mW (+13 dBm)
>>>
>>> My real question is will I get much output power with only +5V on
>>> Vcc1 or should I just tie it to +13.6V just as Vcc2?
>>>
>>> THANKS!!
>>>
>>> Scott
>>> N0EDV
>>
>>
>>
> With Vcc1 at 5V, I get 6.8 Watts out during testing. It appears I will
> actually need to lower Vcc1 just a bit to get down to my desired 4
> Watts. Thanks for the note!
==========
From a list with RF power modules by Mitsubishi I get the following spec :
M67749M
Freq range : 430 - 450 MHz
Po : 7 watts
Gp : 25.4 dB
Pin : 20 mW
Vcc : 12.5 V
Vbb : 5 V (if a Vbb is indicated ,this is a linear module suitable

for SSB operation )

Vcc (max rating) : 15 V
Po (max rating : 10 Watts

Package outline : H27

Frank GM0CSZ / KN6WH

# 1702. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 17:09:40 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <xMGdne1Yp-dIHI3UnZ2dnUVZ8vGdnZ2d@pipex.net>
Source record: 4189

Ralph Mowery wrote:
> "Rich Klestinez" <replytogroup@noplace.cc> wrote in message
> news:cOCPk.7521$kd5.6503@newsfe01.iad...
>> I used to work for a company (ARCO Oil) that used a bunch of those. Weller
>> closely guarded their schematics and even now they will not release them.
>> We sent them in for repair but they charged about as much as to buy a new
>> one. Here is what I found over fixing a dozen or so.
>> 1) The wire nuts came loose inside
>> 2) Intermittent wires in the cable going to the soldering iron. Flex the
>> cable while ohming end to end.
>> 3) The surface mount electrolytics go bad. These were MOST of the
>> failures and I ended up changing all of them in the rest of the 25
>> irons we used over about 3 years.
>> 4) The cheap temperature set wire wound pot gets worn out.
>>
>> Most of the parts in this unit are consumer rated parts and are available.
>> Never had any problems with the ceramic boards in the units or with the
>> printed resistors on them. Had a couple of chips fail. It's an A to D
>> with a seven segment driver built in. They are available still.
>>
>> Other than the above, they are really a darn good soldering iron and keep
>> the tip temperature regulated fairly closely.
>>
>> I still have 2 of them so if you decide to throw them away, send them to
>> me and I can use them for parts to keep mine in repair. I will reimburse
>> you for your shipping.
>>
>> I have more info If you need it.
>>
>> Rich Klesstinez
>> 3728 Crestline Rd
>> Fort Worth Tx 76107
>>
>> Email:
>> (my name, lower case, no spaces) at charter (dot) net
>>
>
> Thanks for the reply. I will probably keep the soldering station. It seems
> to work fine, just no display. Weller made another modle that seemed to be
> the same unit without the display. I guess that if Weller did repair them,
> they probably just changed out the controller board. Similar to what the
> Commador computer people did. They had a flat repair rate. Don;t recall
> exectally,but it was something like the board cost them $ 50 and vethey
> charged about $ 70 to repair the computer. All they did was throw away the

> old insides and replace them. Seems this way is cheeper than the labor to
> repair them.
==========
On the topic of Weller soldering irons , I would appreciate info on the
following :

At a fleamarket I acquired a Weller soldering iron with a DIL16
de-soldering pad (very handy to remove ICs with up to 16 pins.
However , the heater element (Weller part nr 24410 , 24V-50W) is
defective (open circuit)
By Googling I haven't been successful finding a US supplier for the
heater element.
Can someone on this NG please help with US supplier info ( in the hope
the cost of a replacement element will not make it necessary for me
having to talk to my bank manager).

TIA for any advice

Frank GM0CSZ / KN6WH

# 1703. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 19:30:06 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <9ea9aaa3-b83c-465e-b370-d13686810d01@a17g2000prm.googlegroups.com>
Source record: 4190

On Nov 1, 4:23 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> We had one of these irons at work and replaced it with a WTCP
> station.

I cannot say how much I love the WTCP's for being a rugged reliable
workhorse.

Tim N3QE

## 1704. Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 22:06:32 UTC
From: Larry Gagnon <lggagnon@fakeuniserve.com>
Message-ID: <op.uj37o6zpaiss39@localhost>
Source record: 4191

Hello. I have a homebrew linear 13.8V 20A power supply I have been using for some years to power an IC-735, a 2M rig and some accessories. The PS has these characteristics:

- well filtered (35000uF)22AMP, 21 volt DC output from diode bridge circuit
- LM-317 regulator circuit (as per LM-317 datasheets)
- MJ2955 NPN feeder transistor from regulator driving 4 - 2N3055 PNP power transistors in parallel
- large heat sinks (I don't think heat is a problem)
- good air circulation with fan

I have the regulator set to 13.7 VDC out. Lately however, I have had some problems with voltage drops: while drawing 20 amps the voltage drops to about 11.3 volts and I have had reports of a rough CW signal as a result.

I have tested the reg circuit and even replaced the LM-317 to no avail. I cannot see where the problem lies, unless perhaps the MJ2955 feeder transistor is not working as it should? (I don't yet have a replacement transistor to test that idea, hence this post).

Any ideas greatly appreciated.

Larry VE7EA

--
For direct email remove fake.

# 1705. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-04 22:37:55 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <55WdnS8KqatQU43UnZ2dnUVZ_qzinZ2d@web-ster.com>
Source record: 4192

Larry Gagnon wrote:
> Hello. I have a homebrew linear 13.8V 20A power supply I have been using
> for some years to power an IC-735, a 2M rig and some accessories. The PS
> has these characteristics:
>
> - well filtered (35000uF)22AMP, 21 volt DC output from diode bridge circuit
> - LM-317 regulator circuit (as per LM-317 datasheets)
> - MJ2955 NPN feeder transistor from regulator driving 4 - 2N3055 PNP
> power transistors in parallel
> - large heat sinks (I don't think heat is a problem)
> - good air circulation with fan
>
> I have the regulator set to 13.7 VDC out. Lately however, I have had
> some problems with voltage drops: while drawing 20 amps the voltage
> drops to about 11.3 volts and I have had reports of a rough CW signal as
> a result.
>
> I have tested the reg circuit and even replaced the LM-317 to no avail.
> I cannot see where the problem lies, unless perhaps the MJ2955 feeder
> transistor is not working as it should? (I don't yet have a replacement
> transistor to test that idea, hence this post).
>
> Any ideas greatly appreciated.
>
> Larry VE7EA
>
It's probably not dropping to a constant 11.3V -- it's probably dropping
out on the valleys of the rectifier's output. A steady low voltage
would either render your transceiver inoperable or lower your output
power; the "rough CW" is probably modulated at 120Hz.

Most likely that "well filtered (35000uF)" has turned to "lots of hum
(dried up electrolytics)".

I assume you don't have an oscilloscope. If you do, clip it onto the
power supply output and take a look while you run it close to it's
limit. Any filtering problems should become immediately apparent.

If you don't have fancy equipment just measure the output with your
voltmeter switched to "AC" -- most VOMs will filter out the DC and just
let you see the wiggly part. Do this under both heavy load and light --
if there's a honking big AC component as the voltage sags then there
needs to be some new capacitors in your future.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 1706. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 00:01:27 UTC
From: "JRCCrabtree@gmail.com" <JRCCrabtree@gmail.com>
Message-ID: <218e931a-ad7f-4f2d-a4eb-53e29f2d5273@w39g2000prb.googlegroups.com>
Source record: 4193

On Nov 4, 11:09 am, highlandham <rfbu...@nospam.com> wrote:

> ==========
> On the topic of Weller soldering irons , I would appreciate info on the
> following :
>
> At a fleamarket I acquired a Weller soldering iron with a DIL16
> de-soldering pad (very handy to remove ICs with up to 16 pins.
> However , the heater element (Weller part nr 24410 , 24V-50W) is
> defective (open circuit)
> By Googling I haven't been successful finding a US supplier for the
> heater element.
> Can someone on this NG please help with US supplier info ( in the hope
> the cost of a replacement element will not make it necessary for me
> having to talk to my bank manager).
>
> TIA for any advice
>
> Frank  GM0CSZ / KN6WH- Hide quoted text -
>
> - Show quoted text -

Hello Frank

Do you have a model number for the iron? If so, what is it?

73 John KC0G

# 1707. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 00:52:19 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <776Qk.2967$Jv2.139@nwrddc01.gnilink.net>
Source record: 4194

"Larry Gagnon" <lggagnon@fakeuniserve.com> wrote in message
news:op.uj37o6zpaiss39@localhost...
> Hello. I have a homebrew linear 13.8V 20A power supply I have been using
> for some years to power an IC-735, a 2M rig and some accessories. The PS
> has these characteristics:
>
> - well filtered (35000uF)22AMP, 21 volt DC output from diode bridge
> circuit
> - LM-317 regulator circuit (as per LM-317 datasheets)
> - MJ2955 NPN feeder transistor from regulator driving 4 - 2N3055 PNP power
> transistors in parallel
> - large heat sinks (I don't think heat is a problem)
> - good air circulation with fan
>
> I have the regulator set to 13.7 VDC out. Lately however, I have had some
> problems with voltage drops: while drawing 20 amps the voltage drops to
> about 11.3 volts and I have had reports of a rough CW signal as a result.
>
> I have tested the reg circuit and even replaced the LM-317 to no avail. I
> cannot see where the problem lies, unless perhaps the MJ2955 feeder
> transistor is not working as it should? (I don't yet have a replacement
> transistor to test that idea, hence this post).
>
> Any ideas greatly appreciated.
>

In addition to Tim's suggestion, If a rectifer diode opened, you might also
experience a similar problem. With a scope, it'll have 60 Hz ripple instead
of 120 Hz ripple when loaded.

-NM

# 1708. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 04:09:20 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B4CE1635372MDWN@194.177.96.78>
Source record: 4195

Howdy,

A few of random suggestions...

The MJ2955 is a PNP and the 2N3055 are NPN.
The pass devices are NPN that make an emitter
follower output which provides current gain.

Load the supply until the voltage drops.
Then measure the base voltage at each 2N3055.
The bases should all be the same, a base to
emitter voltage drop higher than the output
voltage. One of the pass devices may have
failed or the drive current could be insufficient.

I'm guessing without a schematic but the MJ2955
is probably boosting the LM317's output and may
also be part of an over current foldback
protection circuit. Check the collector voltage
it should be nearly the same as the 2N3055 base
voltage. If it's much higher that points to a
problem with the pass devices. If it's not then
there's not enough loop gain.

You may find a high power low value resistor near
the MJ2955 for current limiting, check the value
of that too. If it's damaged or drifted high
you could be hitting the current fold back
protection.

The 21V bulk supply will sag if there is a bad
rectifier so a check of that under load is a good
test. If it's much below 18V that could be too
low. The LM317 needs about 3V head room and the
2N3055 will need a Vbe drop.

I think if the bulk cap had dried up you'd hear
hum even at lower load current.

You can trouble shoot this with a voltmeter,
stage-by-stage, once you load it until it's
exhibiting the problem. Once you identify the
failing stage a careful visual inspection followed
by some resistance and junction checks should
solve the puzzle.

73,
Grumpy

"Larry Gagnon" <lggagnon@fakeuniserve.com> wrote in
news:op.uj37o6zpaiss39@localhost:

> Hello. I have a homebrew linear 13.8V 20A power supply I have been
> using for some years to power an IC-735, a 2M rig and some
> accessories. The PS has these characteristics:
>
> - well filtered (35000uF)22AMP, 21 volt DC output from diode bridge
> circuit - LM-317 regulator circuit (as per LM-317 datasheets)
> - MJ2955 NPN feeder transistor from regulator driving 4 - 2N3055 PNP
> power transistors in parallel
> - large heat sinks (I don't think heat is a problem)
> - good air circulation with fan
>
> I have the regulator set to 13.7 VDC out. Lately however, I have had
> some problems with voltage drops: while drawing 20 amps the voltage
> drops to about 11.3 volts and I have had reports of a rough CW signal
> as a result.
>
> I have tested the reg circuit and even replaced the LM-317 to no
> avail. I cannot see where the problem lies, unless perhaps the MJ2955
> feeder transistor is not working as it should? (I don't yet have a
> replacement transistor to test that idea, hence this post).
>
> Any ideas greatly appreciated.
>
> Larry VE7EA
>

# 1709. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 04:19:57 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B4CE3306F7312MDWN@194.177.96.78>
Source record: 4196

Oh!

I forgot to say if the 2N3055's don't have individual
base drive resistors, if their bases are all wired
together, then you'd have to pull them and check the
base-to-emitter and base-to-collector junctions with
the VOM to know if one had failed. I've seen a smaller
supply built like that and one of two 2N3055 had failed.
It made 8A instead of 12A output before going out of
regulation.

If there are individual base resistors the 2N3055 with
the higher base voltage, because there's no current drawn
though its drive resistor, is the bad one.

73,
Grumpy

Grumpy The Mule <s_foonly@foo.bar> wrote in
news:Xns9B4CE1635372MDWN@194.177.96.78:

> Load the supply until the voltage drops.
> Then measure the base voltage at each 2N3055.
> The bases should all be the same, a base to
> emitter voltage drop higher than the output
> voltage. One of the pass devices may have
> failed or the drive current could be insufficient.

# 1710. Financial crisis came in to farm industry. Viagra sell 300 percents

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 06:14:43 UTC
From: tyreemand@gmail.com
Message-ID: <957bdefb-dfa7-4a19-bd2f-aa3f17a6b1fa@d42g2000prb.googlegroups.com>
Source record: 4197
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://farmos.freetzi.com/ Financial crisis came in to farm industry.
Viagra sell 300 percents

# 1711. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 08:03:52 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <as6dnWFp9O_1zozUnZ2dnUVZ_uednZ2d@giganews.com>
Source record: 4198

Ralph Mowery wrote:
>
> RFI-EMI-GUY wrote:
>> I have same model unit with same exact problem. Yest it does regulate the
>> temperature. I haven't figured out the display problem either and the
>> thermistor in the iron seems to "ohm out" properly. Let me know what you
>> find. I never could find schematics for it. I used it just today on a PIC
>> project. Shame to throw it out, but I would like to read the temperature.
>>
>> --
>> Joe Leikhim K4SAT
>
> I found several schematics for different models. Never did find the one
> that matches mine. I opened it up and it seems there is a ceramic board
> with surface devices on it. Almost no user replicable parts. Atleast for
> my skill level. I was hoping it would be the discrete parts. I can work
> with them. Oh well, it was free and is a good soldering iron even without
> the display. I do have a couple of spare parts for it also.
>
> de KU4PT

Hi Ralph,

In my surfing, I found this reverse-engineered service manual for the EC2002: http://www.geocities.com/bswadener/temp/Weller_EC-2002.pdf or http://tinyurl.com/5ff6qx (PDF, 372 KB). It may be of use to you and others.

vy 73,
Bryan WA7PRC

# 1712. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 15:22:15 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <4911ba23$0$4914$9a6e19ea@unlimited.newshosting.com>
Source record: 4199

Bryan wrote:
> Ralph Mowery wrote:
>> RFI-EMI-GUY wrote:
>>> I have same model unit with same exact problem. Yest it does regulate the
>>> temperature. I haven't figured out the display problem either and the
>>> thermistor in the iron seems to "ohm out" properly. Let me know what you
>>> find. I never could find schematics for it. I used it just today on a PIC
>>> project. Shame to throw it out, but I would like to read the temperature.
>>>
>>> --
>>> Joe Leikhim K4SAT
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>> that matches mine. I opened it up and it seems there is a ceramic board
>> with surface devices on it. Almost no user replicable parts. Atleast for
>> my skill level. I was hoping it would be the discrete parts. I can work
>> with them. Oh well, it was free and is a good soldering iron even without
>> the display. I do have a couple of spare parts for it also.
>>
>> de KU4PT
>
> Hi Ralph,
>
> In my surfing, I found this reverse-engineered service manual for the
> EC2002: http://www.geocities.com/bswadener/temp/Weller_EC-2002.pdf or
> http://tinyurl.com/5ff6qx (PDF, 372 KB). It may be of use to you and
> others.
>
> vy 73,
> Bryan WA7PRC
>
>
Thanks!

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

# 1713. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 16:44:41 UTC
From: Larry Gagnon <lggagnon@fakeuniserve.com>
Message-ID: <op.uj5ngrfbaiss39@localhost>
Source record: 4200

Thanks everyone above for all your input and suggestions. Very useful. I will get into it and do a few more tests.

# 1714. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 17:11:43 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <61079639-ab8e-4cf0-a772-eceda91e5016@i20g2000prf.googlegroups.com>
Source record: 4051

hey larry

I see trouble with the bypass caps on the LM317 regulator. They have
opened up and now the adjust pin, which is an op amp input, isn't
bypassed, letting in massive quantities of rf and overloading the op
amps ability to compare the reference voltage to the adjust pin
voltage.

73 OM
n8zu

On Nov 4, 5:06 pm, "Larry Gagnon" <lggag...@fakeuniserve.com> wrote:
> Hello. I have a homebrew linear 13.8V 20A power supply I have been using
> for some years to power an IC-735, a 2M rig and some accessories. The PS
> has these characteristics:
>
> - well filtered (35000uF)22AMP, 21 volt DC output from diode bridge circuit
> - LM-317 regulator circuit (as per LM-317 datasheets)
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> transistors in parallel
> - large heat sinks (I don't think heat is a problem)
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>
> I have the regulator set to 13.7 VDC out. Lately however, I have had some
> problems with voltage drops: while drawing 20 amps the voltage drops to
> about 11.3 volts and I have had reports of a rough CW signal as a result.
>
> I have tested the reg circuit and even replaced the LM-317 to no avail. I
> cannot see where the problem lies, unless perhaps the MJ2955 feeder
> transistor is not working as it should? (I don't yet have a replacement
> transistor to test that idea, hence this post).
>
> Any ideas greatly appreciated.
>
> Larry VE7EA
>
> --
> For direct email remove fake.

# 1715. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-05 23:40:54 UTC
From: Highland Ham <rfburns@allbands.net>
Message-ID: <2qidnZCTopeVso_UnZ2dnUVZ8vidnZ2d@pipex.net>
Source record: 4052

JRCCrabtree@gmail.com wrote:
> On Nov 4, 11:09 am, highlandham <rfbu...@nospam.com> wrote:
>
>> ==========
>> On the topic of Weller soldering irons , I would appreciate info on the
>> following :
>>
>> At a fleamarket I acquired a Weller soldering iron with a DIL16
>> de-soldering pad (very handy to remove ICs with up to 16 pins.
>> However , the heater element (Weller part nr 24410 , 24V-50W) is
>> defective (open circuit)
>> By Googling I haven't been successful finding a US supplier for the
>> heater element.
>> Can someone on this NG please help with US supplier info ( in the hope
>> the cost of a replacement element will not make it necessary for me
>> having to talk to my bank manager).
>>
>> TIA for any advice
>>
>> Frank  GM0CSZ / KN6WH- Hide quoted text -
>>
>> - Show quoted text -
==========
> Hello Frank
>
> Do you have a model number for the iron? If so, what is it?
==========
It is a Weller ECP 24V-50W iron (with a DIL 16 de-soldering bit)

Frank GM0CSZ / KN6WH

# 1716. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-06 00:21:52 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <yeydnQUrHI_cpY_UnZ2dnUVZ_vadnZ2d@earthlink.com>
Source record: 4053

"Bryan" <bryan.swadenerNOSPAM@comcast.net> wrote in message >> I found
several schematics for different models. Never did find the one
>> that matches mine. I opened it up and it seems there is a ceramic board
>> with surface devices on it. Almost no user replicable parts. Atleast
>> for my skill level. I was hoping it would be the discrete parts. I can
>> work with them. Oh well, it was free and is a good soldering iron even
>> without the display. I do have a couple of spare parts for it also.
>>
>> de KU4PT
>
> Hi Ralph,
>
> In my surfing, I found this reverse-engineered service manual for the
> EC2002: http://www.geocities.com/bswadener/temp/Weller_EC-2002.pdf or
> http://tinyurl.com/5ff6qx (PDF, 372 KB). It may be of use to you and
> others.
>
> vy 73,
> Bryan WA7PRC
Thanks for sending that Bryan. It is too bad for me that is not the one I
have. From the outside it looks like it, but inside it is totally
differant. There seem to be several modles that look similar on the outside
but differant inside. The one I have has a C after the 2002.

# 1717. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-06 03:22:01 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <2f5fc08f-8a44-4339-a399-55dbb4959a08@e38g2000prn.googlegroups.com>
Source record: 4054

On Nov 4, 5:06 pm, "Larry Gagnon" <lggag...@fakeuniserve.com> wrote:
> Hello. I have a homebrew linear 13.8V 20A power supply I have been using
> for some years to power an IC-735, a 2M rig and some accessories. The PS
> has these characteristics:
>
> - well filtered (35000uF)22AMP, 21 volt DC output from diode bridge circuit
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> transistors in parallel
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> - good air circulation with fan
>
> I have the regulator set to 13.7 VDC out. Lately however, I have had some
> problems with voltage drops: while drawing 20 amps the voltage drops to
> about 11.3 volts and I have had reports of a rough CW signal as a result.
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> I have tested the reg circuit and even replaced the LM-317 to no avail. I
> cannot see where the problem lies, unless perhaps the MJ2955 feeder
> transistor is not working as it should? (I don't yet have a replacement
> transistor to test that idea, hence this post).
>
> Any ideas greatly appreciated.
>
> Larry VE7EA
>
> --
> For direct email remove fake.

Sounds like my power supply. One of the emitter resistors on a pass
transistor opened. The transistor did not fail. I replaced the
resistors and decided to upgrade the 2n3055 to some NTE181s. Also
modified the power supply for remote sense to allow for IR losses in
the power cable.

# 1718. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-07 07:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1226041500@panix.com>
Source record: 4055
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
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# 1719. BASE STATION CB radios and Linear Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-07 12:19:53 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <49143270$0$14274$607ed4bc@cv.net>
Source record: 4056

I have 2 older CB BASE station radios. ONE IS SSB.. and the other is AM only

And I have a 100 + watt Knight T 175 AMP. 10 mtr and 6 mtr AMP. ALL THIS EQUIPMENT IS IN NEED OF REPAIR. THE AM unit comes on and I got sound out of it. Squelch Noise. COMES WITH NICE TURNER DESK MIC

THE SSB radio has NO power cord.. SO I could not power it. COMES with MIC.,.

THE AMP powered up.. Made some noise. SO I pulled the plug.

Pictures of all above by e-mail.

I will trade for a NON working HF transceiver.

73

Mike WB2GLW

## 1720. smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-07 15:51:30 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <e8aa2cc3-52af-40c4-9eed-35595f1fb460@v16g2000prc.googlegroups.com>
Source record: 4057

I have a 15volt 25 amp SMPS that I would like to convert to a +/- 15 volt power supply. I was wonder if I could do this by adding two diodes to the present two diode full wave rectifier circuit to turn it into a bridge. Also the power supply seems to be operating at about 25Khz, but the diodes are standard recovery. Would there be any benifit to switching to fast recovery diodes.

Jimmie

# 1721. Re: smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-07 17:13:29 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B4F72320E8602MDWN@194.177.96.78>
Source record: 4058

Hi Jimme,

Yes you can, you'll need to add a second output filter too
of course. I'd make the second filter for the negative
output a duplicate of the existing filter except for the
polarity of the capacitors. A coupled inductor would be
better but might effect the control loop compensation.

For a 15V output I'd most likely use schottky diodes for their
low forward voltage and no reverse recovery (at the expense of
higher capacitance.) Maybe have to add a small series RC
snubber across the schottkys if there's a lot of ringing.

Any benefit to using faster recovery diodes would depend on
how fast the diodes now in use are switching. I've seen
crappy old 1N4004 diodes with 35nS recovery times when operating
at several amperes of forward current. That's ultra-fast!
But they're specified as standard recovery... this really
screwed up a base drive clamp where they were expected to be
slow.

If they are 1uS parts, changing to something faster should
reduce switching losses. Might make the supply quieter...
or more noisey! Ultra-fast parts with soft recovery would be
my second choice after schottkys. They tend to produce the
least EMI and what noise they do produce is easier to snub
and filter in addition to low switching losses.

73
Grumpy

JIMMIE <jimmie68@gmail.com> wrote in news:e8aa2cc3-52af-40c4-9eed-
35595f1fb460@v16g2000prc.googlegroups.com:

> I have a 15volt 25 amp SMPS that I would like to convert to a +/- 15
> volt power supply. I was wonder if I could do this by adding two
> diodes to the present two diode full wave rectifier circuit to turn it
> into a bridge. Also the power supply seems to be operating at about
> 25Khz, but the diodes are standard recovery. Would there be any
> benifit to switching to fast recovery diodes.
>
> Jimmie
>

# 1722. Re: smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-07 22:47:03 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B4FAAC0510342MDWN@194.177.96.78>
Source record: 4059

I forgot to mention that I made the assumption it's a forward converter that produces symmetrical output. I'm expecting it's a half-bridge converter. Other topologies would require an additional winding to the transformer.

73
Grumpy

# 1723. Re: Voltage drop problems with power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-08 02:34:00 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <4Kudnc-IG8oHZ4nUnZ2dnUVZ_jCdnZ2d@web-ster.com>
Source record: 4060

Larry Gagnon wrote:
> Thanks everyone above for all your input and suggestions. Very useful. I
> will get into it and do a few more tests.

Let us know how it works out.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 1724. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-08 20:52:19 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-04F809.15521908112008@nntp.aioe.org>
Source record: 4061

In article <yeydnQUrHI_cpY_UnZ2dnUVZ_vadnZ2d@earthlink.com>,
"Ralph Mowery" <rmowery28146@earthlink.net> wrote:

> Thanks for sending that Bryan. It is too bad for me that is not the one I
> have. From the outside it looks like it, but inside it is totally
> differant. There seem to be several modles that look similar on the outside
> but differant inside. The one I have has a C after the 2002.

Ralph-

Take a look at
<http://bama.edebris.com/manuals/weller/>
where the EC2002 and EC2002m are listed. Perhaps one of these will be
closer to yours.

Fred
K4DII

# 1725. FA: EAC R-390A

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-08 22:35:37 UTC
From: K <K@spam.net>
Message-ID: <49161439$0$4954$9a6e19ea@unlimited.newshosting.com>
Source record: 4062
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FA: EAC R-390A on ebay --

R-390A HF Receiver - 280283671494

--

# 1726. Re: smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 02:39:46 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <da8150b8-d79d-4b31-8d67-4895af2ddbef@v13g2000pro.googlegroups.com>
Source record: 4063

On Nov 7, 5:47 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> I forgot to mention that I made the assumption it's a forward
> converter that produces symmetrical output. I'm expecting it's
> a half-bridge converter. Other topologies would require an
> additional winding to the transformer.
>
> 73
> Grumpy

Right, to pick up the negative supply you has to have a waveform that has enough negative going cycle you might be able to pick up sum ringing waveform and rectify it. Don't expect to gits -15 volts @ 25 amps.

If you're lucky you have a push pull front end. But I don't think your -15 is going to be regulated.

73 OM

n8zu

# 1727. Re: smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 05:49:42 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B50F2678429B2MDWN@194.177.96.78>
Source record: 4064

Howdy,

It's a pretty safe bet that it's a topology which will work,
because the existing output is described as a center tapped
full wave configuration. (If I read Jimmie's post correctly.)

I'm expecting it's a half-bridge with its 375W output. Then
two center tapped full wave outputs of opposite polarity from
one winding can be built.

In this case the output voltage is mainly determined by the bulk
supply's voltage, the switch's duty cycle and the transformer's
turns ratio. All of those are identical for each output, because
they use the same secondary winding.

With a somewhat balanced load and identical output circuits,
cross regulation (regulating only the +15) should work ok.
A coupled inductor would further improve the regulation.
Then sensing across the outputs (30V) or summing them might be
desirable. It all depends on what the load requirements will be. .

In that power range another popular topology is the single or
two switch forward converter. In these the switches drive the
core in one direction then let it reset by various mechanisms.

It's kind of interesting, replace two diagonally opposed
switches in a full bridge with rectifiers and you have a two
switch forward converter. Then the output voltage waveform
is asymmetrical and you're forced to use half wave rectification.

It's very rare to see a flyback converter at this power level
with such a low output voltage. It's possible some special
applications might require one but it's generally ugly and
not economical.

Anyway... I think it's worth a try but I could be wrong.

73,
Grumpy

raypsi <RBorowiak@gmail.com> wrote in news:da8150b8-d79d-4b31-8d67-
4895af2ddbef@v13g2000pro.googlegroups.com:

> On Nov 7, 5:47 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
>> I forgot to mention that I made the assumption it's a forward
>> converter that produces symmetrical output. I'm expecting it's
>> a half-bridge converter. Other topologies would require an
>> additional winding to the transformer.

>>
>> 73
>> Grumpy
>
> Right, to pick up the negative supply you has to have a waveform that
> has enough negative going cycle you might be able to pick up sum
> ringing waveform and rectify it. Don't expect to gits -15 volts @ 25
> amps.
>
> If you're lucky you have a push pull front end. But I don't think
> your -15 is going to be regulated.
>
> 73 OM
>
> n8zu
>
>

# 1728. Re: smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 05:53:32 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B50F30E9859A2MDWN@194.177.96.78>
Source record: 4065

Oh, that's a good point... at best Jimmie could get half
as much per output. +/- 15V at 12.5A for the 375W output
that the primary circuits and transformer are designed for.

# 1729. Re: smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 15:10:57 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <1c076d7b-e48a-4098-b2da-b41e256dc8de@k36g2000pri.googlegroups.com>
Source record: 4066

On Nov 9, 12:53 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Oh, that's a good point... at best Jimmie could get half
> as much per output.  +/- 15V at 12.5A  for the 375W output
> that the primary circuits and transformer are designed for.

Well it works but it wasnt as easy as I thought it would be.
Putting in the bridge was the easy part. I still had to find a
place for another filter cap and a choke. The caps werent too
much of a problem. I removed the origonal one and was able
to fit 2new smaller ones in their place. Since I was going to
drawing a lot less current than the PS was designed I
figured I could use smaller caps. I still havent settled on
where to place the choke. Its just hanging out the side
for now. I will eventually try some fast recovery diodes but
since the power supply origonally use stardard recovery
diodes that is what I will use for now. The heat sink the
diodes are mounted on get fairly warm, maybe fast ones
will help this.

Jimmie

# 1730. LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 15:37:30 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf703r071p@news7.newsguy.com>
Source record: 4067

Hi,
Can somebody walk me thru the calculation of an LC circuit where the capacitor is tapped down on the coil? I see this often done for bandspreading purposes.

Tnx,
Bill WX4A

# 1731. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 16:36:49 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B516BFAA892D2MDWN@194.177.96.78>
Source record: 4068

Howdy,

I'm guessing that it can be solved like this...
Consider the autotransformer action of the tapped inductor.
Then divide the tap capacitor (C2) value by the square of the
turns ratio (N) before adding it to the primary capacitance
of the parallel tuned circuit (C1.)

F=2Pi*sqrt(L(C1+C2/N^2))

I found a rigorous solution in chapter 8 of Alternating
Current Circuits by K.Y. Tang but it's too messy to type.

73,
Grumpy

exray <radioexray@geeemail.com> wrote in news:gf703r071p@news7.newsguy.com:

> Hi,
> Can somebody walk me thru the calculation of an LC circuit where the
> capacitor is tapped down on the coil? I see this often done for
> bandspreading purposes.
>
> Tnx,
> Bill WX4A
>

# 1732. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 17:13:12 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf75n902u84@news3.newsguy.com>
Source record: 4069

Thanks Grump...gonna save that for my files but I think I need to
clarify my question. One cap only...not one across the tank and another
on the tap although thats an interesting idea. Maybe this schematic
will help.

http://www.antiqueradios.org/gazette/pix/sw3-1sch.jpg

-Bill

Grumpy The Mule wrote:
> Howdy,
>
> I'm guessing that it can be solved like this...
> Consider the autotransformer action of the tapped inductor.
> Then divide the tap capacitor (C2) value by the square of the
> turns ratio (N) before adding it to the primary capacitance
> of the parallel tuned circuit (C1.)
>
> F=2Pi*sqrt(L(C1+C2/N^2))
>
> I found a rigorous solution in chapter 8 of Alternating
> Current Circuits by K.Y. Tang but it's too messy to type.
>
>
> 73,
> Grumpy
>
>
>
> exray <radioexray@geeemail.com> wrote in news:gf703r071p@news7.newsguy.com:
>
>> Hi,
>> Can somebody walk me thru the calculation of an LC circuit where the
>> capacitor is tapped down on the coil? I see this often done for
>> bandspreading purposes.
>>
>> Tnx,
>> Bill WX4A
>>
>

# 1733. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 18:22:23 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B517DE0448792MDWN@194.177.96.78>
Source record: 4070

Howdy,

Oh, ok! I have seen a tapped down band spread capacitor
circuit so I assumed...

I wonder why they did that? Oh, looking at it the another
way, the grid impedance loading the parallel tuned circuit
is transformed by the turns ratio. Probably to provide
some voltage gain from that stage.

If the capacitance of the grid is negligible, then the
resonance is determined by the inductance from the
portion of the winding paralleled by the variable capacitor.

If you want to include the grid capacitance in parallel
with the variable capacitor, multiply it by the turns
ratio. Otherwise the solution is essentially the same.

73,
Grumpy

exray <radioexray@geeemail.com> wrote in
news:gf75n902u84@news3.newsguy.com:

> Thanks Grump...gonna save that for my files but I think I need to
> clarify my question. One cap only...not one across the tank and
> another on the tap although thats an interesting idea. Maybe this
> schematic will help.
>
> http://www.antiqueradios.org/gazette/pix/sw3-1sch.jpg

# 1734. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 20:23:17 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf7grm0iq1@news7.newsguy.com>
Source record: 4071

Grumpy The Mule wrote:

>
> If the capacitance of the grid is negligible, then the
> resonance is determined by the inductance from the
> portion of the winding paralleled by the variable capacitor.

So what about the 'top' portion of the coil being effectively in series
with the tank? Wouldn't that affect the tank values?

Tnx?

## 1735. And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 20:28:29 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf7h5e0j98@news7.newsguy.com>
Source record: 4072

I pulled mine off the shelf today to dust off the cobwebs. Much to my chagrin I found the tuning capacitor almost frozen stuck. For those that aren't familiar with the construction of these there's a lot of nylon? bushings involved.

I suspect lubrication may be the culprit that causes the nylon to swell up. I was finally able to get it loose enough to where the vernier doesn't slip although it still feels very tight.

Too late for me to avoid lubrication but I thought I'd pass this along for the next guy.

-Bill

# 1736. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 21:22:48 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B519C76F51022MDWN@194.177.96.78>
Source record: 4073

Howdy,

Maybe not. Imagine the top portion disconnected, it would
have very little effect. It's no more than a small capacitor
swamped out by the tuning capacitance.

I think if the grid capacitance times the square of the turns
ratio is small compared to the tuning capacitance, it can be
ignored. Because there are other strays that will require
a bit of pruning in any case.

The most significant effect would be when the tuning capacitor
is at its minimum value. So it's here that it may effect the
design of the inductor, requiring a bit less inductance for the
desired upper band limit compared to the other tuned winding.

There are no padding capacitors on that schematic. So I suspect
there are seperate tuning capacitors for each tuned winding on
the transformer. Because of this I believe it's not that
critical. You could measure the grid capacitance with the
tube mounted in its socket on the chassis. Then add that
capacitance times the turns ratio to the value of the tuning
capacitor when you calculate the necessary inductance value.

Or build the coil so you can stretch it (slip a few windings
further apart) a little once the thing is running. Then secure
them with a bit of wax.

73,
Grumpy

exray <radioexray@geeemail.com> wrote in news:gf7grm0iq1@news7.newsguy.com:

> Grumpy The Mule wrote:
>
>>
>> If the capacitance of the grid is negligible, then the
>> resonance is determined by the inductance from the
>> portion of the winding paralleled by the variable capacitor.
>
> So what about the 'top' portion of the coil being effectively in series
> with the tank? Wouldn't that affect the tank values?
>
> Tnx?
>

# 1737. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 21:59:12 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B51A2A2980E12MDWN@194.177.96.78>
Source record: 4074

Howdy,

Heh! I didn't look at the url for that schematic, it's an SW3!
I love National Radio gear. I had two HRO-500's, sold one, and
there's an FRR-59 in my basment. I regret having sold my pristine
RBL receiver which beat the pants off either the HRO-500 with LF10
or the Racal RAL7 with RA237 for LF/VLF work. My highschool's club
had an NCX-1000 which I lusted after... er, but only in my heart.

But back to the SW3. I recall padder capacitors mounted on the
top of the RF stage coil former. I don't know the value of the
dual gang tuning capacitor but armed with that, Wheeler's formula
and these sites, you could calculate the effect of the grid circuit
to some extent.

http://www.io.com/~nielw/sw3coils.htm
http://www.antiqueradios.org/gazette/swevol.htm

73,
Grumpy

# 1738. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 22:18:13 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B51A5DC2314B2MDWN@194.177.96.78>
Source record: 4075

Well that's sad. I doubt it's nylon which was invented in 1938,
maybe phenolic? Wood filled phenolic which swells... ugh!
Maybe you can rinse it with solvent then dry it out so it will
shrink back to nominal dimensions. The rest of it is constructed
of isolantite and brass which solvents won't hurt.

exray <radioexray@geeemail.com> wrote in news:gf7h5e0j98@news7.newsguy.com:

> I pulled mine off the shelf today to dust off the cobwebs. Much to my
> chagrin I found the tuning capacitor almost frozen stuck. For those
> that aren't familiar with the construction of these there's a lot of
> nylon? bushings involved.
>
> I suspect lubrication may be the culprit that causes the nylon to swell
> up. I was finally able to get it loose enough to where the vernier
> doesn't slip although it still feels very tight.
>
> Too late for me to avoid lubrication but I thought I'd pass this along
> for the next guy.
>
> -Bill
>

# 1739. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 22:41:42 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf7ov70p68@news7.newsguy.com>
Source record: 4076

Grumpy The Mule wrote:
> Well that's sad. I doubt it's nylon which was invented in 1938,
> maybe phenolic? Wood filled phenolic which swells... ugh!
> Maybe you can rinse it with solvent then dry it out so it will
> shrink back to nominal dimensions. The rest of it is constructed
> of isolantite and brass which solvents won't hurt.

Could be phenolic but it really seems like a plastic of sorts. Hard to tell. The front bushing is where it got tight and there's no easy way to get it out for a thorough cleaning.

-Bill

# 1740. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 22:48:39 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf7pc90pee@news7.newsguy.com>
Source record: 4077

Grumpy The Mule wrote:
>
> But back to the SW3. I recall padder capacitors mounted on the
> top of the RF stage coil former. I don't know the value of the
> dual gang tuning capacitor but armed with that, Wheeler's formula
> and these sites, you could calculate the effect of the grid circuit
> to some extent.
>
> http://www.io.com/~nielw/sw3coils.htm
> http://www.antiqueradios.org/gazette/swevol.htm

Only the bandspread coils have the trimmer on top and thats basically to set the rough frequency. The main tuning then becomes a bandspread tuning. I've forgotten all this stuff - I'll have to look back at my stuff...maybe the trimmer falls in series with the main tuning caps.

Anyway, thats just an example that came to mind. I've seen others doing similar tricks for main tune/bandspread tune using the same cap but with a different coil configuration.

-Bill

# 1741. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-09 22:49:26 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <6913aedb-fd69-421a-99bd-c4ba07399f55@z28g2000prd.googlegroups.com>
Source record: 4078

On Nov 9, 8:36 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> I'm guessing that it can be solved like this...
> Consider the autotransformer action of the tapped inductor.
> Then divide the tap capacitor (C2) value by the square of the
> turns ratio (N) before adding it to the primary capacitance
> of the parallel tuned circuit (C1.)
>
> F=2Pi*sqrt(L(C1+C2/N^2))
>
> I found a rigorous solution in chapter 8 of Alternating
> Current Circuits by K.Y. Tang but it's too messy to type.
>
> 73,
> Grumpy
>
> exray <radioex...@geeemail.com> wrote innews:gf703r071p@news7.newsguy.com:
>
> > Hi,
> > Can somebody walk me thru the calculation of an LC circuit where the
> > capacitor is tapped down on the coil?  I see this often done for
> > bandspreading purposes.
>
> > Tnx,
> > Bill WX4A
>
>

One thing to be a bit careful about is including the coupling between the coil sections. Since I don't know how those particular coils were designed, I can't say for sure, but in general the coupling between pieces of the coil isn't as high as you might think.

You can make a good estimate for typical HF single-layer air-core solenoid coils just using your favorite coil calculation. For example, consider a coil that's one inch diameter, two inches long, 20 turns per inch, and tapped at the 30th turn (1.5 inches) up from the bottom. Then the whole coil is about 16.32uH, the 1.5" part is about 11.54uH, and the top 0.5" is about 2.63uH. If the coupling were perfect between the sections, I believe the inductance of the whole would be about 11.54uH + 2.63uH + 2*sqrt(11.54*2.63)uH = 25.19uH. At 16.32uH for the whole coil, the implied coupling coefficient between those two sections is only about 0.20, and you need to be careful to not think of the tapped coil as simply a transformer with a 3:1 turns

ratio, with implied close coupling between the sections. (This also illustrates why you can short out turns of a tank coil without totally killing the net inductance...)

I trust if I've hosed the calculation too badly, someone will point out the error of my ways. ;-)

Cheers,
Tom

# 1742. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 00:04:01 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B51B7CBE74DD2MDWN@194.177.96.78>
Source record: 4079

Howdy,

That's an excellent point. I expect that the sections
of the coil in question will not have very good coupling.
I hadn't considered it! I calculate the same inductance
values.

Bah! In my previous posts the "(sqrtL*C)" should be "(1/sqrtL*C)"
Heh... with a pencil and paper the formula turned out right.
I noticed this when I calculated the resonance of the two
values 16.32uH and 11.54uH with an arbitrary value of 50pF
just to verify how I thought things should be.

So from this I gather that the extension of the coil
connected to the grid circuit will have even less
effect on the tuning than I expected.

The Easy Teenage NewYork method of solving this would be
to put the problem into SPICE with the estimated coupling
coefficent of 0.2.

I've never liked shorting turns to reduce an inductance.
Seems like an avoidable source of some losses no matter
how you slice it. But for some long coils, like antennas,
it works ok. I guess.

K7ITM <k7itm@msn.com> wrote in
news:6913aedb-fd69-421a-99bd-c4ba07399f55@z28g2000prd.googlegroups.com:

> One thing to be a bit careful about is including the coupling between
> the coil sections. Since I don't know how those particular coils were
> designed, I can't say for sure, but in general the coupling between
> pieces of the coil isn't as high as you might think.
>
> You can make a good estimate for typical HF single-layer air-core
> solenoid coils just using your favorite coil calculation. For
> example, consider a coil that's one inch diameter, two inches long, 20
> turns per inch, and tapped at the 30th turn (1.5 inches) up from the
> bottom. Then the whole coil is about 16.32uH, the 1.5" part is about
> 11.54uH, and the top 0.5" is about 2.63uH. If the coupling were
> perfect between the sections, I believe the inductance of the whole
> would be about 11.54uH + 2.63uH + 2*sqrt(11.54*2.63)uH = 25.19uH. At
> 16.32uH for the whole coil, the implied coupling coefficient between
> those two sections is only about 0.20, and you need to be careful to
> not think of the tapped coil as simply a transformer with a 3:1 turns
> ratio, with implied close coupling between the sections. (This also

> illustrates why you can short out turns of a tank coil without totally
> killing the net inductance...)
>
> I trust if I've hosed the calculation too badly, someone will point
> out the error of my ways. ;-)
>
> Cheers,
> Tom

## 1743. Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 00:20:46 UTC
From: KC7PM <tedcowan@gmail.com>
Message-ID: <eae6e066-6db4-493a-bccf-5e0b6b7c4f6a@d36g2000prf.googlegroups.com>
Source record: 4080

I saw something in the last year or two about building a PC that runs entirely on 12V and with low power consumption. Does anyone know where I can find that article or website?

Thanks in advance...

...ted, KC7PM

# 1744. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 00:30:27 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <deLRk.1014$Lv6.532@bignews8.bellsouth.net>
Source record: 4081

exray wrote:
> Grumpy The Mule wrote:
>> Well that's sad. I doubt it's nylon which was invented in 1938,
>> maybe phenolic? Wood filled phenolic which swells... ugh!
>> Maybe you can rinse it with solvent then dry it out so it will
>> shrink back to nominal dimensions. The rest of it is constructed
>> of isolantite and brass which solvents won't hurt.
>
> Could be phenolic but it really seems like a plastic of sorts. Hard to
> tell. The front bushing is where it got tight and there's no easy way
> to get it out for a thorough cleaning.
>
> -Bill
That is a VERY weird capacitor. First of all it tunes through 270 degrees of rotation using a unique shape of rotor plate, stator plates are triangular. Second weird thing is that the shaft bearings are insulated from the frame, the rotor is grounded at a single point, a flexible conductor running though the hollow shaft and grounded at the rear of the rotor. I have a single gang version of that capacitor that was 'featured' in the one tube regenerative receiver from the A. P. Morgan 'Boy Electrician' book from the 50's. National did make scales for their velvet vernier dials that went through 270 degrees of rotation for use with these capacitors.

# 1745. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 00:35:06 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <AiLRk.1017$Lv6.547@bignews8.bellsouth.net>
Source record: 4082

Grumpy The Mule wrote:
> Howdy,
>
> Heh! I didn't look at the url for that schematic, it's an SW3!
> I love National Radio gear. I had two HRO-500's, sold one, and
> there's an FRR-59 in my basment. I regret having sold my pristine
> RBL receiver which beat the pants off either the HRO-500 with LF10
> or the Racal RAL7 with RA237 for LF/VLF work. My highschool's club
> had an NCX-1000 which I lusted after... er, but only in my heart.
>
> But back to the SW3. I recall padder capacitors mounted on the
> top of the RF stage coil former. I don't know the value of the
> dual gang tuning capacitor but armed with that, Wheeler's formula
> and these sites, you could calculate the effect of the grid circuit
> to some extent.
>
> http://www.io.com/~nielw/sw3coils.htm
> http://www.antiqueradios.org/gazette/swevol.htm
>
>
> 73,
> Grumpy
IIRC the SW3 used a dual 100uuf capacitor. It's a weird one that
tunes through 270 degrees of rotation.

# 1746. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 01:33:14 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf830s011te@news7.newsguy.com>
Source record: 4083

ken scharf wrote:

> That is a VERY weird capacitor. First of all it tunes through 270
> degrees of rotation using a unique shape of rotor plate, stator plates
> are triangular. Second weird thing is that the shaft bearings are
> insulated from the frame, the rotor is grounded at a single point, a
> flexible conductor running though the hollow shaft and grounded at the
> rear of the rotor. I have a single gang version of that capacitor that
> was 'featured' in the one tube regenerative receiver from the A. P.
> Morgan 'Boy Electrician' book from the 50's. National did make scales
> for their velvet vernier dials that went through 270 degrees of rotation
> for use with these capacitors.

Agree with WEIRD. After goofing around with it I had a heck of a time
getting everything realigned. Never did see a way to completely
disassemble it.
Whats your take on the type of insulating material?

-Bill

# 1747. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 02:20:57 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <dUMRk.499$U5.420@nwrddc01.gnilink.net>
Source record: 4084

"KC7PM" <tedcowan@gmail.com> wrote in message
news:eae6e066-6db4-493a-bccf-5e0b6b7c4f6a@d36g2000prf.googlegroups.com...
>I saw something in the last year or two about building a PC that runs
> entirely on 12V and with low power consumption. Does anyone know
> where I can find that article or website?

I think I remember something in QST awhile back, but I'm sure it was more
than a couple years ago. IIRC, the author had a bad battery pack for his
laptop, so he rebuilt it by removing the bad section and providing a
connector to bridge the remaining batteries (for charging) and to power the
laptop externally with a 12VDC supply.

Hope This Helps,

-NM

# 1748. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 02:30:13 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf86bm01cqi@news4.newsguy.com>
Source record: 4085

Norm Mann wrote:
> "KC7PM" <tedcowan@gmail.com> wrote in message
> news:eae6e066-6db4-493a-bccf-5e0b6b7c4f6a@d36g2000prf.googlegroups.com...
>> I saw something in the last year or two about building a PC that runs
>> entirely on 12V and with low power consumption. Does anyone know
>> where I can find that article or website?
>
> I think I remember something in QST awhile back, but I'm sure it was more
> than a couple years ago. IIRC, the author had a bad battery pack for his
> laptop, so he rebuilt it by removing the bad section and providing a
> connector to bridge the remaining batteries (for charging) and to power the
> laptop externally with a 12VDC supply.
>
> Hope This Helps,
>
> -NM
>
>
>
I heard a guy on a radio program just last week describing a small
notebook - about half to 3/4 the size of a normal one. Uses flash
drives instead of a hard drive. Said power consumption wasn't much more
than a well equipped cellphone. Sounds incredible, don't know if such a
thing is actually on the market yet. Just FYI.

-Bill

## 1749. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 03:24:30 UTC
From: bob prohaska's usenet account <bp@www.zefox.net>
Message-ID: <OPNRk.5780$as4.4067@nlpi069.nbdc.sbc.com>
Source record: 4086

KC7PM <tedcowan@gmail.com> wrote:
> I saw something in the last year or two about building a PC that runs
> entirely on 12V and with low power consumption. Does anyone know
> where I can find that article or website?

You might take a look at
http://www.idotpc.com/thestore/pc/viewCategories.asp?idCategory=68
to see what they have to offer. Apparently it's not difficult to get
a 12 volt input computer power supply that fits one of the standard
compact cases.

HTH,

bob prohaska

# 1750. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 06:19:03 UTC
From: gsm@mendelson.com
Message-ID: <slrnghfkav.k38.gsm@cable.mendelson.com>
Source record: 4087

exray wrote:

> I heard a guy on a radio program just last week describing a small
> notebook - about half to 3/4 the size of a normal one. Uses flash
> drives instead of a hard drive. Said power consumption wasn't much more
> than a well equipped cellphone. Sounds incredible, don't know if such a
> thing is actually on the market yet. Just FYI.

MacBook Air, Asus EEE, Acer 100, and a whole bunch of no name clones.

If you are in the UK, Elonex ONE, which sells for 100 quid.

Geoff.

--
Geoffrey S. Mendelson, Jerusalem, Israel gsm@mendelson.com N3OWJ/4X1GM

# 1751. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 07:32:48 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6nq6dpF6rcpU1@mid.individual.net>
Source record: 4088

exray wrote:

> I heard a guy on a radio program just last week describing a small
> notebook - about half to 3/4 the size of a normal one. Uses flash
> drives instead of a hard drive. Said power consumption wasn't much more
> than a well equipped cellphone. Sounds incredible, don't know if such a
> thing is actually on the market yet. Just FYI.

The thing you want is the Asus EEE PC:

http://eeepc.asus.com/global/products.html?n=0

Don't bother with the Windows version - it makes it almost as expensive as a full-size laptop, and suffers from all the multitude of Windows problems. The original version runs Xandros Linux, and there's a /huge/ range of software available at no cost, including lots of electronic design and ham radio programs.

I use one for a mobile packet station, for logging and for morse or teletype modes.

Bob

## 1752. The London Fetish Week Survival Guide for North Americans

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 11:43:32 UTC
From: tyreemand@gmail.com
Message-ID: <96d34299-5de5-468f-9e54-86a28f29327a@i18g2000prf.googlegroups.com>
Source record: 4089
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Magazine BDSM http://magazin.byethost2.com Hands-down, London has some
the best fetish party weekends around.

# 1753. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 13:36:11 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <e3cdd4c4-06c8-43da-b30b-21a2de769847@i18g2000prf.googlegroups.com>
Source record: 4090

On Nov 9, 5:18 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Well that's sad.  I doubt it's nylon which was invented in 1938,
> maybe phenolic?  Wood filled phenolic which swells... ugh!
> Maybe you can rinse it with solvent then dry it out so it will
> shrink back to nominal dimensions.  The rest of it is constructed
> of isolantite and brass which solvents won't hurt.

I have witnessed 50 or 70 year old variable capacitors of
low-to-middle grade construction where I swear it's the metal
that's swelling. The spacers between plates seem to have
expanded or contracted so that while the rotor/stator mesh is centered
at the center of the capacitor, at the ends the rotor and stator are
nearly
touching.

Others tell me this is well-known but I still don't have any
understanding
of why metal would shrink or grow with time.

Tim N3QE

# 1754. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 14:38:27 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gf9h14022h3@news3.newsguy.com>
Source record: 4092

Tim Shoppa wrote:

>
> Others tell me this is well-known but I still don't have any
> understanding
> of why metal would shrink or grow with time.
>
> Tim N3QE

Where there's pot metal involved it certainly swells up. Thats a
scourge in 1920s sets that use pot metal pulleys, brackets and capacitor
frames. My understanding is that it is due to reaction/corrosion
between the various metals in the 'pot' mix.

-Bill

# 1755. Re: smps mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 14:38:35 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <fef81e21-2f94-495f-9039-17045d1ae7ec@p35g2000prm.googlegroups.com>
Source record: 4091

On Nov 9, 10:10 am, JIMMIE <jimmi...@gmail.com> wrote:
> On Nov 9, 12:53 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
>
> > Oh, that's a good point... at best Jimmie could get half
> > as much per output.  +/- 15V at 12.5A  for the 375W output
> > that the primary circuits and transformer are designed for.
>
> Well it works but it wasnt as easy as I thought it would be.
> Putting in the bridge was the easy part. I still had to find a
> place for another filter cap and a choke. The caps werent  too
> much of a problem. I removed the origonal one and was able
> to fit 2new smaller ones in their place. Since I was going to
> drawing a lot less current than the PS was designed I
> figured I could use smaller caps. I still havent settled on
> where to place the choke. Its just hanging out the side
> for now. I will eventually try some fast recovery diodes but
> since the power supply origonally use stardard recovery
> diodes that is what I will use for now. The heat sink the
> diodes are mounted on get fairly warm, maybe fast ones
> will help this.
>
> Jimmie

Trying to figure this one out, The choke has two small wires
going back to the circuit board to a potentiometer and some
unidentifyable ICs. The pot is sealed with RTV. I am guessing
this is for overcurrent sensing. If I could verify this I would like
to set it to activate at about 10 amps.

Jimmie

# 1756. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 15:28:26 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <34fd28db-79ae-4b85-9368-3d53afb8fe91@t18g2000prt.googlegroups.com>
Source record: 4093

On Nov 10, 9:38 am, exray <radioex...@geeemail.com> wrote:
> Tim Shoppa wrote:
>
> > Others tell me this is well-known but I still don't have any
> > understanding
> > of why metal would shrink or grow with time.
>
> > Tim N3QE
>
> Where there's pot metal involved it certainly swells up.  Thats a
> scourge in 1920s sets that use pot metal pulleys, brackets and capacitor
> frames.  My understanding is that it is due to reaction/corrosion
> between the various metals in the 'pot' mix.
>
> -Bill

This sounds like what may have happened to some old drives I had.
A guy gave me half a bushel of the things telling me he thought they
would work if I cleaned them up. I bet he had gone through the other
half a bushel trying. I was able to repair a few by drilling out the
holes
and inserting the brass ferrules removed from old pots. I hope this
proved
to be a good fix and the guy that bought them from me isnt cursing
me too loudly.

Jimmie

# 1757. Re: And speaking of the National SW-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 15:58:28 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <ad9e1c4c-02ed-4bb3-b1b8-479e9c8bcf49@e1g2000pra.googlegroups.com>
Source record: 4094

On Nov 10, 9:38 am, exray <radioex...@geeemail.com> wrote:
> Tim Shoppa wrote:
>
> > Others tell me this is well-known but I still don't have any
> > understanding
> > of why metal would shrink or grow with time.
>
> > Tim N3QE
>
> Where there's pot metal involved it certainly swells up.  Thats a
> scourge in 1920s sets that use pot metal pulleys, brackets and capacitor
> frames.  My understanding is that it is due to reaction/corrosion
> between the various metals in the 'pot' mix.

Well, my metallurgy knowledge has always been particularly poor.

With the problem variables I have on the shelf, the issue isn't
necessarily
the spacing between adjacent plates but the cumulative swelling
over a dozen or more spacers.

I have discovered that by disassembling the caps and grinding
every 3rd or 4th spacer down by a smidgen that the result seems
just fine.

This only helps on the capacitors that can be disassembled... but the
pot metal spacer problem seems to be worst in the kind that can be
disassembled.

Some later top-quality air variables I have use something that
is either welding or silver brazing to space/hold the elements on a
solid rod. These do not have the spacing problems. They're pieces
of beauty...!

Tim.

# 1758. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 20:30:27 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <fe688924-41c1-4d72-90c7-0ac8b9069a94@l33g2000pri.googlegroups.com>
Source record: 4095

Hmmm, looks to me like that tapped tank is the oscillator set up for
the super regeneration...

denny ... k8do

# 1759. Re: LC calculation

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 20:58:22 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <25b97c0d-05ea-4b85-9f22-f704e50452aa@q26g2000prq.googlegroups.com>
Source record: 4096

On Nov 10, 3:30 pm, Denny <k...@mailblocks.com> wrote:
> Hmmm, looks to me like that tapped tank is the oscillator set up for
> the super regeneration...
>
> denny ...  k8do

And a second thought is see the same thing on the second stage, where the top portion of that tank is in series between the tank and the control grid... Redraw that circuit in your head so that the top portion of coil is bent over at a right angle to the tank... I wonder if the grid to cathode capacity is too high for comfort and the series section of coil is for taming that... We do that for amplifiers on 10 meters where the plate capacity is too high for comfortable tuning... A small series coil between the plate and the tank calms that down...

# 1760. SM0VPO Homeages - Update

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 21:30:20 UTC
From: Harry Lippitz <johnsmith@micro$oft.com>
Message-ID: <MJ1Sk.3973$U5.25690@newsb.telia.net>
Source record: 4097

Hi all,

A few things have happened since my last update. The homepages are to be found at http://web.telia.com/~u85920178/ where there are some 250+ projects, many with PCB foil patterns in BMP format, 250 dpi. This means you do not need any special software to view it.

The lastest project was DIY transformers. the link is http://web.telia.com/~u85920178/power/diy_transformers.htm and it uses those cheap transformers from http://www.kjell.com

I also did an article on diode switching basics, but this I also translated into Swedish and sent to the SSA for publication. The URL for the original article is http://web.telia.com/~u85920178/data/diode_switching_01.htm

The old messageboard is now defunkt - kaput - deceased. Instyead I have a nice new forum at http://sm0vpo.wahlberg.cc but you should bookmark the address http://web.telia.com/~u85920178/board.htm so that I can again change in the future. The new board is hosted by Magnus Wahlberg in Eskilstuna, and a fine thing it is too. Message at the bottom do not just drop off into space. Old messages stay there until I or a moderator deletes them.

Perhaps you never thought about it, but the old formula for frequency = 1 / 2 x Pi x Root(LC), and the only variables are F, L and C. So for any value of F you can build a table of Root(LC) values. For example an index of 1MHz = 25000. If you divide 25000 by 250pf you need 25000/250 = 100uH for resonance.The value for 2MHz is 6250, so if you subtract one index from the other, you can work out the variable capacitor you need to track tuning between the two frequencies. The article is at http://web.telia.com/~u85920178/data/tune_01.htm

Future articles are many and I have several that are all nearing completion. Progress is interrupted by a speeding ticket with one of those stooopid speed cameras. Now I know how they function I will shortly be publishing a speed-camera blocker. I will also offer a few in kit form, until I get my 2400:- back.

I have also finished a "Generating 230V AC Power in 5 Minutes" video film. The link is at http://www.youtube.com/watch?v=t3yvdXIjGSo

Best regards to all from Harry - SM0VPO
SKYPE: "harry.sm0vpo"
E-mail: oeieio@hotmail.com

# 1761. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 21:46:51 UTC
From: highlandham <rfburns@nospam.sco>
Message-ID: <tN6dnTLjt9YZNoXUnZ2dneKdnZydnZ2d@pipex.net>
Source record: 4098

KC7PM wrote:
> I saw something in the last year or two about building a PC that runs
> entirely on 12V and with low power consumption. Does anyone know
> where I can find that article or website?
==========
The new generationn of mini-laptops like Asus eeePC and I believe also
the similar devices from Acer and Dell run on 12 V -DC

Frank GM0CSZ / KN6WH

PS:I am happy with the eeePC

# 1762. FA: EAC R-390A HF Receiver Auction # 280283671494

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 22:04:36 UTC
From: K <K@spam.net>
Message-ID: <4918aff7$0$17064$9a6e19ea@unlimited.newshosting.com>
Source record: 4099

FA: EAC R-390A HF Receiver Auction # 280283671494 or click on below:
http://fyad.org/wq4z

# 1763. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-10 22:09:58 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <90853ff4-a29e-4167-900c-77583682f7f0@l33g2000pri.googlegroups.com>
Source record: 4100

On Nov 10, 4:46 pm, highlandham <rfbu...@nospam.sco> wrote:
> KC7PM wrote:
> > I saw something in the last year or two about building a PC that runs
> > entirely on 12V and with low power consumption.  Does anyone know
> > where I can find that article or website?
>
> ==========
> The new generationn of mini-laptops like Asus eeePC and I believe also
> the similar devices from Acer and Dell run on 12 V -DC
>
> Frank   GM0CSZ / KN6WH
>
> PS:I am happy with the eeePC

They are a great little PC at a GREAT price. They are not selling so
hot,
Maybe the price will get even better.

Jimmie

# 1764. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-11 01:43:22 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6ns6alFl5pmU1@mid.individual.net>
Source record: 3951

JIMMIE wrote:

> They are a great little PC at a GREAT price. They are not selling so
> hot,

They might not be selling where you live, but over here in the UK the shops can't get enough of them. The Linux ones are outselling the XP ones by a factor of 4 to 1 - partly because of the price, and partly because the performance with XP is pretty bad, especially when you add all that anti-virus nonsense.

I just got four of the 10" for £135 each (about $200). They run Xandros Linux and are excellent for most computer users - you can browse web pages, write and receive email and type documents with just the basic supplied software. Performance is amazingly quick, and you don't need to worry about viruses. There are lots of ham radio programs available free on the 'net for them...

Bob

## 1765. ADONIS AM 808G mocrophone

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-11 10:15:10 UTC
From: Renaud <renauctv@free.fr>
Message-ID: <49195b2e$0$850$426a74cc@news.free.fr>
Source record: 3952

an anyone help with service manual ( schematic/ ....) for this, please?
Thanks for all - 73 Renaud

# 1766. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-11 17:30:06 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <b825958f-871c-49e2-9067-81f9a4ead046@i20g2000prf.googlegroups.com>
Source record: 3953

On Nov 10, 8:43 pm, Bob <biasco...@invalid.inv> wrote:
> JIMMIE wrote:
> > They are a great little PC at a GREAT price. They are not selling so
> > hot,
>
> They might not be selling where you live, but over here in the UK the shops
> can't get enough of them.  The Linux ones are outselling the XP ones by a
> factor of 4 to 1 - partly because of the price, and partly because the
> performance with XP is pretty bad, especially when you add all that
> anti-virus nonsense.
>
> I just got four of the 10" for £135 each (about $200).  They run Xandros Linux
> and are excellent for most computer users - you can browse web pages, write
> and receive email and type documents with just the basic supplied software.
> Performance is amazingly quick, and you don't need to worry about viruses.
> There are lots of ham radio programs available free on the 'net for them...
>
> Bob

I know I dont have a problem with Linux either but casual users here
in the
states are afraid of it. I use Linux or various versions daily at work
and love
it. They are selling for about $270 here in the states. Still a
bargain. I was in
the process of building a car PC but that project ended when I found
net-
books.

Jimmie

# 1767. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-11 21:31:23 UTC
From: highlandham <rfburns@nospam.sco>
Message-ID: <v86dndH_2Pr6ZITUnZ2dnUVZ8uydnZ2d@pipex.net>
Source record: 3954

KC7PM wrote:
> I saw something in the last year or two about building a PC that runs
> entirely on 12V and with low power consumption. Does anyone know on 1.6
> where I can find that article or website?
==========
The new generationn of mini-laptops like Asus eeePC and I believe also
the similar devices from Acer and Dell run on 12 V -DC
They all use a Pentium Atom N270 processor

Frank GM0CSZ / KN6WH

PS:I am happy with the ASUS eeePC

# 1768. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 00:24:01 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6num1sF10ncjU1@mid.individual.net>
Source record: 3955

JIMMIE wrote:

> I know I dont have a problem with Linux either but casual users here
> in the states are afraid of it. I use Linux or various versions daily
> at work and love it. They are selling for about $270 here in the states.
> Still a bargain. I was in the process of building a car PC but that
> project ended when I found net-books.

I can't understand the reluctance of the Americans to use Linux. There has been no real reason to use Windows for a long time (unless you want to play games, but a PS3 is best for that). Over here in Europe, Linux uptake continues rapidly - as each new Windows virus or worm hits, ever more people and businesses migrate.

The last time I entered the 'States, the Customs guy demanded to look at my laptop, and see that it would actually work and that I wasn't importing a bomb. I started it up, and got my very pretty 3D Gnome desktop up, and he asked me what it was. I then got a lecture about how it was "un-American" and "Commie" not to use Windows! The fact that I am a Brit, and that Fedora (my usual distro of choice) is American, entirely passed him by...

Bob

# 1769. Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 04:35:04 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gfdmdq01f4h@news6.newsguy.com>
Source record: 3956

Hi,
I've gotten far enough along with this project to where I'm ready to toss it out for public scrutiny, so have at me, guys.

I'm a receiver guy - never built a tube transmitter from scratch and this is my first go. My goals were, in no particular order, to build something with a early 30s breadboard look, xtal control, 40/20 meters primarily - 80/30 as bonus, moderate power for getting on the air barefoot while not overpowering a future amp idea...and of course using accessible parts.

This is sort of my compilation of ideas from old QST articles. Robbed ideas from this and that to make them fit. I made some major boo-boos at first but I think I finally have them sorted out. Something that dawned on me a little bit slowly is that none of those old xmtrs were set up to operate 40 meters with a 7 Mc xtal. Much of the emphasis was on double this/double that. Nowadays we have 7 and 14 Mc fundamental xtals abounding so I went the route of reinventing the wheel so to speak.

The rig is working at this stage...at least straight thru on 40. Waiting for some other bits and bobs to carry on to other bands. The note sounds good and its nothing I'm reluctant to put on the air. On the other hand its a massive amount of wood and metal for a measly 5 or 6 watts :) A little slatboard 6V6 chirper would have been much easier.

Anyway, I'm not a veteran with old xmtrs so I'm putting it out for comments, questions, critiques, etc. Flame suit is handy!

Schematic:
http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/schema111108.jpg

View:
http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg

-Bill WX4A/KP4

## 1770. porn trailers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 12:46:54 UTC
From: tyreemand@gmail.com
Message-ID: <d9d49dd6-a634-43ec-a943-80b5074ff0ce@i18g2000prf.googlegroups.com>
Source record: 3957
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

porn trailers http://pupir.byethost9.com/bdsm.htm porn videos
http://pupir.byethost9.com/hardcore.htm free homemade porn
http://pupir.byethost9.com/lesbi.htm hardcore porn http://pupir.byethost9.com/amateur.htm

# 1771. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 13:01:57 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <a_Odna2I3-9bTofUnZ2dnUVZ_qPinZ2d@bright.net>
Source record: 3958

exray wrote:

> Hi,
> I've gotten far enough along with this project to where I'm ready to
> toss it out for public scrutiny, so have at me, guys.
>
> I'm a receiver guy - never built a tube transmitter from scratch and
> this is my first go. My goals were, in no particular order, to build
> something with a early 30s breadboard look, xtal control, 40/20 meters
> primarily - 80/30 as bonus, moderate power for getting on the air
> barefoot while not overpowering a future amp idea...and of course using
> accessible parts.
>
> This is sort of my compilation of ideas from old QST articles. Robbed
> ideas from this and that to make them fit. I made some major boo-boos
> at first but I think I finally have them sorted out. Something that
> dawned on me a little bit slowly is that none of those old xmtrs were
> set up to operate 40 meters with a 7 Mc xtal. Much of the emphasis was
> on double this/double that. Nowadays we have 7 and 14 Mc fundamental
> xtals abounding so I went the route of reinventing the wheel so to speak.
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> The rig is working at this stage...at least straight thru on 40. Waiting
> for some other bits and bobs to carry on to other bands. The note
> sounds good and its nothing I'm reluctant to put on the air. On the
> other hand its a massive amount of wood and metal for a measly 5 or 6
> watts :) A little slatboard 6V6 chirper would have been much easier.
>
> Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
> comments, questions, critiques, etc. Flame suit is handy!
>
> Schematic:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/schema111108.jpg
>
> View:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>
>
> -Bill WX4A/KP4

Looks SUPER COOL! How's the harmonics? Did you use any external low
pass filter? Spectrum analyzer trace available?

Keep playing with it! Looks like a neat little project!

Scott
N0EDV

# 1772. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 14:26:33 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gfep2r02p4l@news7.newsguy.com>
Source record: 3959

Scott wrote:

>
> Looks SUPER COOL! How's the harmonics? Did you use any external low
> pass filter? Spectrum analyzer trace available?

Thanks. No I can't answer any of the harmonic issues. My closest neighbor is still an antenna-bound tv viewer and she doesn't report any interference...which was on my list of goals as well. It has been a limiting factor in the past.
-Bill

# 1773. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 16:07:14 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <3dKdnYOWkdI_Y4fUnZ2dnUVZ_gadnZ2d@posted.cpinternet>
Source record: 3960

exray wrote:

<snip>

> Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
> comments, questions, critiques, etc.

<snip>

Beautiful! Would you consider a breadboarded arc or spark xmitter
for your next project? Some years ago I did one using the obligatory
Model T spark coil, on 80m, that lit up a 12W bulb dummy load quite
brightly.

Michael

# 1774. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 16:13:18 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gfevau0hje@news5.newsguy.com>
Source record: 3961

msg wrote:
> exray wrote:
>
> <snip>
>
>> Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
>> comments, questions, critiques, etc.
>
> <snip>
>
> Beautiful! Would you consider a breadboarded arc or spark xmitter
> for your next project? Some years ago I did one using the obligatory
> Model T spark coil, on 80m, that lit up a 12W bulb dummy load quite
> brightly.
>
> Michael

Hehe, I don't think they would allow me on the air with that :)

-Bill

# 1775. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 16:32:31 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <QxDSk.4348$Gm3.3762@newsfe01.iad>
Source record: 3962

Looks good, no, very good. Better than my home made transmitters.

On the schematic, you missed a strap on the doubler coil. The ground pin
should be connected to the nearby "coil" pin. I didn't go over the
schematic in detail but I was interested in how you connected the
doubler coil.

Bill K7NOM
exray wrote:
> Hi,
> I've gotten far enough along with this project to where I'm ready to
> toss it out for public scrutiny, so have at me, guys.
>
> I'm a receiver guy - never built a tube transmitter from scratch and
> this is my first go. My goals were, in no particular order, to build
> something with a early 30s breadboard look, xtal control, 40/20 meters
> primarily - 80/30 as bonus, moderate power for getting on the air
> barefoot while not overpowering a future amp idea...and of course
> using accessible parts.
>
> This is sort of my compilation of ideas from old QST articles. Robbed
> ideas from this and that to make them fit. I made some major boo-boos
> at first but I think I finally have them sorted out. Something that
> dawned on me a little bit slowly is that none of those old xmtrs were
> set up to operate 40 meters with a 7 Mc xtal. Much of the emphasis
> was on double this/double that. Nowadays we have 7 and 14 Mc
> fundamental xtals abounding so I went the route of reinventing the
> wheel so to speak.
>
> The rig is working at this stage...at least straight thru on 40.
> Waiting for some other bits and bobs to carry on to other bands. The
> note sounds good and its nothing I'm reluctant to put on the air. On
> the other hand its a massive amount of wood and metal for a measly 5
> or 6 watts :) A little slatboard 6V6 chirper would have been much
> easier.
>
> Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
> comments, questions, critiques, etc. Flame suit is handy!
>
> Schematic:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/schema111108.jpg
>
> View:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>

>
> -Bill WX4A/KP4

# 1776. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 16:41:19 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gff0vg0kmm@news3.newsguy.com>
Source record: 3963

Bill Janssen wrote:
> Looks good, no, very good. Better than my home made transmitters.
>
> On the schematic, you missed a strap on the doubler coil. The ground pin
> should be connected to the nearby "coil" pin. I didn't go over the
> schematic in detail but I was interested in how you connected the
> doubler coil.
>
> Bill K7NOM

Good eye. I'll make the correction on the drawing. Thanks.

Bill WX4A

# 1777. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 16:44:49 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <09mdnUUad6IsmobUnZ2dnUVZ_vudnZ2d@posted.cpinternet>
Source record: 3964

exray wrote:

> Bill Janssen wrote:
>
>> Looks good, no, very good. Better than my home made transmitters.
>>
>> On the schematic, you missed a strap on the doubler coil. The ground
>> pin should be connected to the nearby "coil" pin. I didn't go over the
>> schematic in detail but I was interested in how you connected the
>> doubler coil.
>>
>> Bill K7NOM
>
>
> Good eye. I'll make the correction on the drawing. Thanks.
>
> Bill WX4A

Just a matter of taste of course, but I find that using dots on wire
connects, even with the use of arced cross-overs, improves readability ;)

Michael

# 1778. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 16:56:17 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gff1ri0lsc@news3.newsguy.com>
Source record: 3965

msg wrote:

>
> Just a matter of taste of course, but I find that using dots on wire
> connects, even with the use of arced cross-overs, improves readability ;)
>
> Michael

Ok, dots-r-us. Revised.

Bill

# 1779. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 16:59:28 UTC
From: JB <nospam@goofball.net>
Message-ID: <QXDSk.36$4g5.6@nwrddc01.gnilink.net>
Source record: 3966

"Bob" <biascomms@invalid.inv> wrote in message
news:6num1sF10ncjU1@mid.individual.net...
> JIMMIE wrote:
>
> > I know I dont have a problem with Linux either but casual users here
> > in the states are afraid of it. I use Linux or various versions daily
> > at work and love it. They are selling for about $270 here in the states.
> > Still a bargain. I was in the process of building a car PC but that
> > project ended when I found net-books.
>
> I can't understand the reluctance of the Americans to use Linux. There
has
> been no real reason to use Windows for a long time (unless you want to
play
> games, but a PS3 is best for that). Over here in Europe, Linux uptake
> continues rapidly - as each new Windows virus or worm hits, ever more
people
> and businesses migrate.
>
> The last time I entered the 'States, the Customs guy demanded to look at
my
> laptop, and see that it would actually work and that I wasn't importing a
> bomb. I started it up, and got my very pretty 3D Gnome desktop up, and he
> asked me what it was. I then got a lecture about how it was "un-American"
> and "Commie" not to use Windows! The fact that I am a Brit, and that
Fedora
> (my usual distro of choice) is American, entirely passed him by...
>
> Bob
>
Obviously just joking with you. Comedy is often a stress releiver. Apple
is the one with the Soviet corprorate model.

Many of the laptops will operate well at 13.8 if you disable all the alerts
and auto shutdown features. You also need to remove the battery so that it
won't run it down. Some will get goofed up thinking there is a shorted
battery though. I used to run my old Panasonic on 12v direct to the battery
input terminals without incident.

I have an APC TravelPower adapter which claims to pull 10 amps at 11-16 v
input. for 3.6 amps at 18v. Ouch! A small msw 120v inverter seems to be a
lot more efficient than that.

# 1780. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 21:22:35 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <c2347491-b604-46ed-b3e7-5ee83d01bcc7@a17g2000prm.googlegroups.com>
Source record: 3967

On Nov 12, 11:59 am, "JB" <nos...@goofball.net> wrote:
> "Bob" <biasco...@invalid.inv> wrote in message
>
> news:6num1sF10ncjU1@mid.individual.net...
>
>
>
> > JIMMIE wrote:
>
> > > I know I dont have a problem with Linux either but casual users here
> > > in the states are afraid of it. I use Linux or various versions daily
> > > at work and love it. They are selling for about $270 here in the states.
> > > Still a bargain. I was in the process of building a car PC but that
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> > I can't understand the reluctance of the Americans to use Linux.  There
> has
> > been no real reason to use Windows for a long time (unless you want to
> play
> > games, but a PS3 is best for that).  Over here in Europe, Linux uptake
> > continues rapidly - as each new Windows virus or worm hits, ever more
> people
> > and businesses migrate.
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> > The last time I entered the 'States, the Customs guy demanded to look at
> my
> > laptop, and see that it would actually work and that I wasn't importing a
> > bomb.  I started it up, and got my very pretty 3D Gnome desktop up, and he
> > asked me what it was.  I then got a lecture about how it was "un-American"
> > and "Commie" not to use Windows!  The fact that I am a Brit, and that
> Fedora
> > (my usual distro of choice) is American, entirely passed him by...
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> > Bob
>
> Obviously just joking with you.  Comedy is often a stress releiver.  Apple
> is the one with the Soviet corprorate model.
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> Many of the laptops will operate well at 13.8 if you disable all the alerts
> and auto shutdown features.  You also need to remove the battery so that it
> won't run it down.  Some will get goofed up thinking there is a shorted
> battery though.  I used to run my old Panasonic on 12v direct to the battery
> input terminals without incident.
>

> I have an APC TravelPower adapter which claims to pull 10 amps at 11-16 v
> input.  for 3.6 amps at 18v.  Ouch!  A small msw 120v inverter seems to be a
> lot more efficient than that.- Hide quoted text -
>
> - Show quoted text -

I have a little APC UPS that I use with vehicle battery in my RV.

Jimmie

# 1781. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-12 22:32:40 UTC
From: Dan Richardson <k6mhe@k6mhe.com>
Message-ID: <celmh4h2mkhfbiq9a36pmek558j5k4k30p@4ax.com>
Source record: 3968

On Wed, 12 Nov 2008 00:24:01 +0000, Bob <biascomms@invalid.inv> wrote:

> can't understand the reluctance of the Americans to use Linux. There has
>been no real reason to use Windows for a long time (unless you want to play
>games, but a PS3 is best for that). Over here in Europe, Linux uptake
>continues rapidly - as each new Windows virus or worm hits, ever more people
>and businesses migrate.

Maybe it is because it can be very difficult, if not impossible, to
find necessary hardware drivers. Especially, if you have some of the
latest equipment models. I have found Linux to be more useful on older
computers as one is much more likely to find the necessary drivers.

For example have recently added a new HP all-in-one laser printer that
includes a scanner and FAX. I have it installed on a dual boot
(Linux/Windows XP) system. While I'm able to print with the Linux
system good luck trying to get the scanner and FAX working. That's
just one example. I have a litany of them.

Regards,
Danny

# 1782. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 00:18:40 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6o1a3rF1cileU2@mid.individual.net>
Source record: 3969

Dan Richardson wrote:

> On Wed, 12 Nov 2008 00:24:01 +0000, Bob <biascomms@invalid.inv> wrote:
>
>> can't understand the reluctance of the Americans to use Linux. There has
>>been no real reason to use Windows for a long time (unless you want to play
>>games, but a PS3 is best for that). Over here in Europe, Linux uptake
>>continues rapidly - as each new Windows virus or worm hits, ever more people
>>and businesses migrate.
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> For example have recently added a new HP all-in-one laser printer that
> includes a scanner and FAX. I have it installed on a dual boot
> (Linux/Windows XP) system. While I'm able to print with the Linux
> system good luck trying to get the scanner and FAX working. That's
> just one example. I have a litany of them.

Funnily enough, I have much the same, but found that HPLip handled printing perfectly, and Xsane handled scanning. Hylafax also works very effectively. No difficult installation or configuration required with the /very/ latest hardware - modern Linux distros have all that pretty much licked!

Just don't buy Canon or Lexmark gear - both companies /actively/ /discourage/ the development of Linux drivers.

Bob

# 1783. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 03:18:41 UTC
From: 998cc <hrd998cc@yahooo.com>
Message-ID: <J2NSk.7623$be.1980@nlpi061.nbdc.sbc.com>
Source record: 3970

Super job, Bill!!
Who cares if it only does a couple of watts, it's beautiful!! I have a replica 1933 TPTG transmitter that is surface mount, wood base. (built by another ham--nice job as well).

73. Russ W6OHM

"exray" <radioexray@geeemail.com> wrote in message news:gfdmdq01f4h@news6.newsguy.com...
> Hi,
> I've gotten far enough along with this project to where I'm ready to toss
> it out for public scrutiny, so have at me, guys.
>
> I'm a receiver guy - never built a tube transmitter from scratch and this
> is my first go. My goals were, in no particular order, to build something
> with a early 30s breadboard look, xtal control, 40/20 meters primarily -
> 80/30 as bonus, moderate power for getting on the air barefoot while not
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> operate 40 meters with a 7 Mc xtal. Much of the emphasis was on double
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> abounding so I went the route of reinventing the wheel so to speak.
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> The rig is working at this stage...at least straight thru on 40. Waiting
> for some other bits and bobs to carry on to other bands. The note sounds
> good and its nothing I'm reluctant to put on the air. On the other hand
> its a massive amount of wood and metal for a measly 5 or 6 watts :) A
> little slatboard 6V6 chirper would have been much easier.
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> Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
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> Schematic:
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> View:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>
>
> -Bill WX4A/KP4

# 1784. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 05:43:11 UTC
From: PhattyMo <phattymo@not.net>
Message-ID: <491bbe5a$0$87065$815e3792@news.qwest.net>
Source record: 3971

Nice work! Very nice!

exray wrote:
> Hi,
> I've gotten far enough along with this project to where I'm ready to
> toss it out for public scrutiny, so have at me, guys.
>
> I'm a receiver guy - never built a tube transmitter from scratch and
> this is my first go. My goals were, in no particular order, to build
> something with a early 30s breadboard look, xtal control, 40/20 meters
> primarily - 80/30 as bonus, moderate power for getting on the air
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> View:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>
>
> -Bill WX4A/KP4

# 1785. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 08:13:18 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.11.13.08.13.18.967471@localhost.localdomain>
Source record: 3972

Wow!

Superb indeed!

--
Gregg

# 1786. Over 80,000 images of beautiful busty women

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 10:57:56 UTC
From: tyreemand@gmail.com
Message-ID: <b0e08dac-e21e-465e-9fe0-668b8cf46b63@40g2000prx.googlegroups.com>
Source record: 3973
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://dunny.withsex.com/ Home of the worlds most downloaded woman,
Danni Ashe. Over 80,000 images of beautiful busty women, nude images,
centerfolds, and porn stars. Original video features, live video
feeds, daily updates.

# 1787. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 11:20:21 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gfh2hn0juu@news6.newsguy.com>
Source record: 3974

geek wrote:
> Wow!
>
> Superb indeed!
> __
> Gregg

Thanks guys.
-Bill

# 1788. mechanical coil switching of two coils`

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 17:26:21 UTC
From: Ross Tucker <rjtucke@gmail.com>
Message-ID: <36e541e1-2127-4496-85b9-910b9f44f594@f37g2000pri.googlegroups.com>
Source record: 3975

I am almost ready to begin fabrication of a new transmitter that I have been working on for a long time now. However, one detail is still eluding me- I would like to use a single rotary switch to select taps on two different coils. In-line ganged switching would be inconvenient for my layout. Is it possible to homebrew a mechanical linkage to turn two switches? I have a front panel and metal deck (vacuum tube construction style), so I could mount gears and cams and stuff, and my layout does have a good clear space between the coils, so there is room. My problem is that I have never read anything about doing this and don't know where to begin looking for parts, etc. Again, I have two coils with four taps each for 40, 20, 15, 10m.

Thank you very much for any thoughts on this matter.

73,
Ross, NS7F

# 1789. Re: mechanical coil switching of two coils`

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 19:20:29 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <3c3a2e54-2f2b-471d-89f5-70f45cce162a@q30g2000prq.googlegroups.com>
Source record: 3976

On Nov 13, 12:26 pm, Ross Tucker <rjtu...@gmail.com> wrote:
> I am almost ready to begin fabrication of a new transmitter that I
> have been working on for a long time now. However, one detail is still
> eluding me- I would like to use a single rotary switch to select taps
> on two different coils. In-line ganged switching would be inconvenient
> for my layout. Is it possible to homebrew a mechanical linkage to turn
> two switches? I have a front panel and metal deck (vacuum tube
> construction style), so I could mount gears and cams and stuff, and my
> layout does have a good clear space between the coils, so there is
> room. My problem is that I have never read anything about doing this
> and don't know where to begin looking for parts, etc. Again, I have
> two coils with four taps each for 40, 20, 15, 10m.
>
> Thank you very much for any thoughts on this matter.

Look at the parts assortments that Robotics Hobbyists buy, from e.g.
Jameco and other places. http://www.jameco.com/ search for "robotics".

Berg and Small Parts Inc sell gears and sprockets and roller chain in
small quantities but they are not cheap. Jameco is cheap.

Sprockets and roller chain or belts are surprisingly effective if not
all your shafts are in-line.

For low-level switching, using relays controlled by DC voltage busses
is great. Surplus small relays are available in vast quantities at
very cheap prices. For non-mechanical switching, diodes can be biased
on and off by DC voltages to act as switches. But once you get to
higher level switching (e.g. transmitter tanks) the cheap relays may
not take the currents or voltages involved. Still, there was an
article in QST a few months ago that used small relays to change the
electrical length of a wire antenna, I was a little surprised at how
do-able it looked.

Tim N3QE

# 1790. FS: AT-271 Military Collapsible Antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-13 19:22:05 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <y7%Sk.167$Je.112@read2.cgocable.net>
Source record: 3977
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.swap

> Have available the AT-271 Military Collabsible Antenna.... $30 USD Plus
> Shipping
>
> This portable antenna can be used for the top section of a Vertical
> Antenna
> OR Horizontal elements for an Antenna System such as the Buddipole tm
> ..... A Great QRP / Portable Antenna weighs only 400 Grams [14 Oz ]
> and measures 104" extended yet only 14" long when folded.
> The construction is the same as is used for sectional fishing poles. Each
> of the 8 hollow tubular metal sections has a plug one one end and a socket
> on the other end. All the sections are connected by a string made of
> either
> a cloth or metal cord. At the bottom of the base element there's a spring
> inside the tube to tension the cord. Some units may use an elastic
> shock-cord material. This way all the elements are kept in order when
> they are disconnected from each other and are held together when assembled
> into a 104" [8.6 Ft] long antenna. When the elements are folded or
> disassembled the package is only 14 inches long.
> The base has a male 3/8-24 thread which is the same as is used on most Ham
> Radio and CB antennas. Some sort of spring base could be used when this
> antenna is used because the hollow antenna elements will "fold" if too
> much
> force is applied to them.
> These units are in Like New Condition.. Sold AS-IS but will not be DOA.
> Have access to more...ASK!
>
> Pictures on www.rodemi.com
>
> Thanks for looking....Norm VE3CZI
>
>

# 1791. HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 03:32:10 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <57a0b89a-3205-4ca1-b5e9-03f4796c0a16@a3g2000prm.googlegroups.com>
Source record: 3978

I built my own 7.5VACT 21amp filament xformer. I needed to supply -500VDC screen voltage to the center tap.So a local ham tells me the insulation better be able to withstand at least 500VDC.

I built my own hipot tester from a voltage doubler and a bank of eight 400WVDC caps. Each cap had a 330 volt charge so like 2640VDC. I figured no problem. I looky up the specs and see if this thingy passes.

I googled and can find no specs for hipot testing. I came across in a usernet group: 2500VAC at 1ma for 1 minute. That didn't really tell me much.

My results are 0,2 micro amps thru a 1 meg series resistor at 1980VDC source voltage. This from either the core or the primary to secondary. The current didn't change even when I went to a 10meg series resistor.

Is there nowhere that you can get specs without paying big bucks for a UL or IEEE book on the topic?

73
n8zu

# 1792. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 07:04:30 UTC
From: Ken chattenton <k.chattenton@btopenworld.com>
Message-ID: <7_ednajA3uZluYDUnZ2dnUVZ8vudnZ2d@bt.com>
Source record: 3979

HI from Ken, G4KIR,

Why not just borrow ( if you don't own one that is ) an Electricians
insulation tester, known over here in the UK as a "MEGGER".
These units can produce around 250-1000volts (if you can get hold of a good
one).
This will test your insulation no problem.

Hope this helps, cheers, ken, G4KIR.

"raypsi" <RBorowiak@gmail.com> wrote in message
news:57a0b89a-3205-4ca1-b5e9-03f4796c0a16@a3g2000prm.googlegroups.com...
>I built my own 7.5VACT 21amp filament xformer. I needed to supply
> -500VDC >
> 73
> n8zu

# 1793. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 08:57:22 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <S3bTk.445$4g5.436@nwrddc01.gnilink.net>
Source record: 3980

"raypsi" <RBorowiak@gmail.com> wrote in message
news:57a0b89a-3205-4ca1-b5e9-03f4796c0a16@a3g2000prm.googlegroups.com...
>I built my own 7.5VACT 21amp filament xformer. I needed to supply
> -500VDC screen voltage to the center tap.So a local ham tells me the
> insulation better be able to withstand at least 500VDC.
>
> I built my own hipot tester from a voltage doubler and a bank of eight
> 400WVDC caps. Each cap had a 330 volt charge so like 2640VDC. I
> figured no problem. I looky up the specs and see if this thingy
> passes.
>
> I googled and can find no specs for hipot testing. I came across in a
> usernet group: 2500VAC at 1ma for 1 minute. That didn't really tell me
> much.
>
> My results are 0,2 micro amps thru a 1 meg series resistor at 1980VDC
> source voltage. This from either the core or the primary to secondary.
> The current didn't change even when I went to a 10meg series resistor.
>
> Is there nowhere that you can get specs without paying big bucks for a
> UL or IEEE book on the topic?

I'm surprised that you couldn't find UL, IEEE or MIL-SPEC (or MIL-STD)
sources on the net through Google or any other search engine.
Just taking the snippet you did come across, I believe that it means that
you must maintain a leakage current less than 1 ma. for 1 minute with an
applied voltage of 2500VAC (about 3500V peak). This is so far above your
typical operating conditions, I'm tempted to say you passed. You do mention
that your results were from the primary OR core to the secondary instead of
primary AND core to the secondary, which is typical for this test, but I'm
not sure it matters for a home-built. I used to have to do a test like this
using 1500VDC with an automatic tester. If there was a problem with
insulation, it showed up quickly. If the room lights were dimmed, you could
see the place where it failed by the arc to ground.

-NM

## 1794. VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 12:13:55 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <b40ffb0b-7e1c-4535-ac51-f05846d00dec@d36g2000prf.googlegroups.com>
Source record: 3981
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

The VoiceMax speech processor is not for everyone...
It's only for radio operators that want maximum range from their rig.
VoiceMax is no gimmick... it uses proven AGC technology to produce
tangible results. Want to know more?
http://tinyurl.com/2ac9r5

## 1795. Microwave Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 13:44:15 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <Z9ednVsJMYktHYDUnZ2dnUVZ_jCdnZ2d@bright.net>
Source record: 3982

As long has there has been some show and tell lately, here is my newly updated webpage showing my work (so far) on my 10 GHz transverter. Just added some block diagrams for my next projects...transverters for 1296, 2304 and 3456 MHz based on the W1GHZ Multiband transverters. Comments welcomed!

Scott, N0EDV
http://corbenflyer.tripod.com/
Then select the "My Ham Radio Page" from the menu on the left side.

# 1796. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 14:10:21 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B565326491F62MDWN@194.177.96.78>
Source record: 3983

Howdy,

A good rule of thumb (derived from many UL specifications)
for equipment with a safety ground is use twice the operating
voltage plus 1KV AC with a test period of one minute.

For reduced test time, one second is allowed for _production_line_
testing with increased test voltage

So for equipment operating at 115VAC you'd qualifying test of
1230VAC from primary to secondary for one minute (use 1250VAC.)

Isolating components like transformers often have to meet the
requirements for double insulation so they are tested at twice
the basic test voltage which is where the 2500VAC test value
comes from.

Often the basic test voltage 1500VAC is applied from input to
ground (chassis) and the double insulation test voltage of
2500VAC is applied from input to output. Because the output
is not tied to the safety ground.

The criteria for failure is non-linear rise of applied voltage or
a sustained arc or measured current above some value. The current
limit varies but 3mA is a good value for equipment that is safety
grounded (not double insulated.)

UL also requires the hi-pot machine to be capable of 500VA output.

Double insulated transformers tested to IEC standards for the EU
with it's higher nominal line voltage may be subjected to hi-pot
voltages as high as 1500V primary to ground and 4000VAC primary
to secondary for one minute.

Caveats

Hi-pot only a test. There are are dimensional requirements
(safety from conductor spacings) and requirements for durability
of insulating materials. You could still grossly violate the
standards, producing a dangerous component, and pass hi-pot.
Two pieces of heavy build magnet wire twisted together will
usually pass 5KVAC hipot, would you trust that with your life?

A person should to follow and understand the applicable standards
under fear of fire, injury or death.

And as always, all of the above may be horribly wrong.

73,
Grumpy

raypsi <RBorowiak@gmail.com> wrote in news:57a0b89a-3205-4ca1-b5e9-03f4796c0a16@a3g2000prm.googlegroups.com:

> I built my own 7.5VACT 21amp filament xformer. I needed to supply
> -500VDC screen voltage to the center tap.So a local ham tells me the
> insulation better be able to withstand at least 500VDC.
>
> I built my own hipot tester from a voltage doubler and a bank of eight
> 400WVDC caps. Each cap had a 330 volt charge so like 2640VDC. I
> figured no problem. I looky up the specs and see if this thingy
> passes.
>
> I googled and can find no specs for hipot testing. I came across in a
> usernet group: 2500VAC at 1ma for 1 minute. That didn't really tell me
> much.
>
> My results are 0,2 micro amps thru a 1 meg series resistor at 1980VDC
> source voltage. This from either the core or the primary to secondary.
> The current didn't change even when I went to a 10meg series resistor.
>
> Is there nowhere that you can get specs without paying big bucks for a
> UL or IEEE book on the topic?
>
> 73
> n8zu

# 1797. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 14:17:04 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B56544A1F94C2MDWN@194.177.96.78>
Source record: 3984

Grumpy The Mule <s_foonly@foo.bar> wrote in
news:Xns9B565326491F62MDWN@194.177.96.78:

> Howdy,
>
> A good rule of thumb (derived from many UL specifications)
> for equipment with a safety ground is use twice the operating
> voltage plus 1KV AC with a test period of one minute.
>
> For reduced test time, one second is allowed for _production_line_
> testing with increased test voltage
>
> So for equipment operating at 115VAC you'd qualifying test of
> 1230VAC from primary to secondary for one minute (use 1250VAC.)
>
> Isolating components like transformers often have to meet the
> requirements for double insulation so they are tested at twice
> the basic test voltage which is where the 2500VAC test value
> comes from.
>
> Often the basic test voltage 1500VAC is applied from input to
> ground (chassis) and the double insulation test voltage of
> 2500VAC is applied from input to output. Because the output
> is not tied to the safety ground.
>
> The criteria for failure is non-linear rise of applied voltage or
> a sustained arc or measured current above some value. The current
> limit varies but 3mA is a good value for equipment that is safety
> grounded (not double insulated.)
>
> UL also requires the hi-pot machine to be capable of 500VA output.
>
> Double insulated transformers tested to IEC standards for the EU
> with it's higher nominal line voltage may be subjected to hi-pot
> voltages as high as 1500V primary to ground and 4000VAC primary
> to secondary for one minute.
>
>
> Caveats
>
> Hi-pot only a test. There are are dimensional requirements
> (safety from conductor spacings) and requirements for durability
> of insulating materials. You could still grossly violate the
> standards, producing a dangerous component, and pass hi-pot.

> Two pieces of heavy build magnet wire twisted together will
> usually pass 5KVAC hipot, would you trust that with your life?
>
> A person should to follow and understand the applicable standards
> under fear of fire, injury or death.
>
>
Sorry, no coffee yet. I should have wrote...

Often the basic test voltage 1250VAC is applied from input to
ground (chassis) and the double insulation test voltage of
2500VAC is applied from input to output. Because the output
is not tied to the safety ground.

Grumpy The Mule <s_foonly@foo.bar> wrote in
news:Xns9B565326491F62MDWN@194.177.96.78:

> Often the basic test voltage 1500VAC is applied from input to
> ground (chassis) and the double insulation test voltage of
> 2500VAC is applied from input to output. Because the output
> is not tied to the safety ground.

# 1798. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 14:17:21 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B5654562AEB52MDWN@194.177.96.78>
Source record: 3985

Sorry, no coffee yet. I should have wrote...

Often the basic test voltage 1250VAC is applied from input to
ground (chassis) and the double insulation test voltage of
2500VAC is applied from input to output. Because the output
is not tied to the safety ground.

Grumpy The Mule <s_foonly@foo.bar> wrote in
news:Xns9B565326491F62MDWN@194.177.96.78:

> Often the basic test voltage 1500VAC is applied from input to
> ground (chassis) and the double insulation test voltage of
> 2500VAC is applied from input to output. Because the output
> is not tied to the safety ground.

# 1799. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 15:27:08 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <gfk5ca$osk$1@news.albasani.net>
Source record: 3986
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew

Tel star Electronics briangriffey@sbcglobal.net
<briangriffey@sbcglobal.net> wrote:
> The VoiceMax speech processor is not for everyone...
> It's only for radio operators that want maximum range from their rig.
> VoiceMax is no gimmick... it uses proven AGC technology to produce
> tangible results. Want to know more?
> http://tinyurl.com/2ac9r5
briangriffey@sbcglobal.net <briangriffey@sbcglobal.net>

What has a ready made module got to do with home brew?

Steve H

## 1800. Wanted: one of those hat guys

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 16:02:18 UTC
From: David Lesher <wb8foz@panix.com>
Message-ID: <gfk7ea$bju$1@reader1.panix.com>
Source record: 3987
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

The ones that go to hamfests and custom embroider a name/logo onto a hat.

There being no hamfests in the DC region for many months, and me having
never asked their names/locations..... I thought this might be a place
to ask.

--
A host is a host from coast to coast.................wb8foz@nrk.com
& no one will talk to a host that's close........[v].(301) 56-LINUX
Unless the host (that isn't close).........................pob 1433
is busy, hung or dead....................................20915-1433

# 1801. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 18:05:25 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B567B01664542MDWN@194.177.96.78>
Source record: 3988

Getting side tracked by the mention of agency requirements,
I didn't answer your question.

To answer your question, there is no agency requirement for
what you're trying to test. Both input and output are not
covered by the low voltage directive because they're both
unsafe to touch. So the only requirement is operational
insulation which your test proved.

I also failed to mention that Most standards allow for DC
testing at 1.414 times the AC voltage required.

# 1802. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 19:10:10 UTC
From: Steve <moparholic@hotmail.com>
Message-ID: <20081114141047.121$Pk@newsreader.com>
Source record: 3989
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew

Stev eH
> What has a ready made module got to do with home brew?
>
> Steve H
>
Nothing, it's just Griffeys' spam through google again.

(need a processor on your CB? contact Brian in his moms basement)

Otherwise killfilter voicemax. No one wanted his 11 meter amplifier either,
so he finally stopped that spam.

73
Steve.

# 1803. Re: mechanical coil switching of two coils`

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 20:39:57 UTC
From: AF6AY <LenAnderson@ieee.org>
Message-ID: <08f8cbcf-3b76-45e3-bf16-3246110da1fd@n33g2000pri.googlegroups.com>
Source record: 3990

On Nov 13, 9:26 am, Ross Tucker <rjtu...@gmail.com> wrote:
> I am almost ready to begin fabrication of a new transmitter that I
> have been working on for a long time now. However, one detail is still
> eluding me- I would like to use a single rotary switch to select taps
> on two different coils. In-line ganged switching would be inconvenient
> for my layout. Is it possible to homebrew a mechanical linkage to turn
> two switches? I have a front panel and metal deck (vacuum tube
> construction style), so I could mount gears and cams and stuff, and my
> layout does have a good clear space between the coils, so there is
> room. My problem is that I have never read anything about doing this
> and don't know where to begin looking for parts, etc. Again, I have
> two coils with four taps each for 40, 20, 15, 10m.

A standard way of extending rotary switches 40+ years ago (notably the Centralab types) was to use a quarter-inch rod coupled to two separate switch shafts. Centralab style had flatted shafts to index their switch wafers. A shaft extender could be used with the rounded rod. All of those hardware pieces are still available at distributors such as Jameco or Ocean State Electronics. Rotary switch pieces, per se, aren't available now.

As a suggestion of a different way, relays are good ways to 'remote' the switching. Modern automobiles use quite a few relays and small, low-power coils with high-power contacts are plentiful. Relays are common in automatic antenna tuners. Four taps selected on two coils would need two sets of SPDT to DPDT contact arrangements. See Futurlec or Digidey or Allied or Mouser for such relays. There is a fairly wide range of relay coil voltages available and each relay is less than $5 in small quantities. Usual breakdown voltage ratings are about 250 V so it is no sweat to handle 100 W transmitter power outputs.

For all-mechanical contact coupling, I might suggest 'tactile' snap-action switches (familiar name 'Microswitch') which are plentiful now. Mechanical coupling could be cams or sliding bars with cam surfaces on them, switches in-line. Sliding bars can be made from aluminum stock found at most

do-it-
yourself home repair stores. I did something like that a dozen years
ago
using aluminum right-angle stock, making cam surfaces by cutting down
the
aluminum slightly to leave the original edge as the 'cam.' The kind
of tactile
switches depends on their contact rating and what kind of RF power you
are
handling. Most on the market today can't handle much more than around
20 W.

Good luck on your project!
73, Len AF6AY

# 1804. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 21:55:45 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0811142129420.7316@sdf.lonestar.org>
Source record: 3991

On Wed, 12 Nov 2008, Dan Richardson wrote:

> Date: Wed, 12 Nov 2008 14:32:40 -0800
> From: Dan Richardson <k6mhe@k6mhe.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: Article about a portable PC that runs on 12v?
>
> On Wed, 12 Nov 2008 00:24:01 +0000, Bob <biascomms@invalid.inv> wrote:
>
>> can't understand the reluctance of the Americans to use Linux. There has
>> been no real reason to use Windows for a long time (unless you want to play
>> games, but a PS3 is best for that). Over here in Europe, Linux uptake
>> continues rapidly - as each new Windows virus or worm hits, ever more people
>> and businesses migrate.
>
> Maybe it is because it can be very difficult, if not impossible, to
> find necessary hardware drivers. Especially, if you have some of the
> latest equipment models. I have found Linux to be more useful on older
> computers as one is much more likely to find the necessary drivers.
>
> For example have recently added a new HP all-in-one laser printer that
> includes a scanner and FAX. I have it installed on a dual boot
> (Linux/Windows XP) system. While I'm able to print with the Linux
> system good luck trying to get the scanner and FAX working. That's
> just one example. I have a litany of them.

I spent a couple of years evaluating Linux here and decided to go back to Windows. I really really wanted Linux to work, but in the end stayed with Windows (98 second edition was best). Here are some of my issues;

1. Hardware compatibility is a major problem, and gets worse the later the distro. Best distros for my hardware were Red hat 5.2 and 6.2, and I could install those distros on any and all of my hardwares (about two dozen boxes), Later distros did not have drivers for earlier CDROM drives where your only other option is boot-from-CDROM, but if your bios does not have that, then you are dead. I have had a lot of experience with installations of Linux that crash before the installation is completed. If you want Linux, start with a shop or company that will sell you all the hardware knowing that that hardware will support the OS. Yes, i spent years on the linux newsgroups reading posts of all kinds of people having all kinds of problems. The multi-boot loaders also have bugs (lilo, grub, etc.) and the books don't tell you what to do if it screws up your box. Also, its a hardware compatibility problem. I had boxes where everything worked fine. Other boxes where the install crashed, the boot manager screwed up, or something else didn't work. YMMV.

2. I like iomega zip disks (100 MB) and the books say the only way Linux can support zip disks is by re-compiling the kernel and I was not about to do that.

3. Especially the later distros: they all need more ram than Windows to work (250 mb, minimum).

4. If you are serious, you need to configure your Linux firewall and the books say if you don't do it right, you're worse off than running without a firewall. I ran Linux for over a year, but got hacked within two months. With Zone Alarm, you just put it into Windows and you get a lot of protection for no work.

5. Unless you have a high spec box (I didn't), all of the aps run slower than Windows. This is because Linux is really multiprocess unlike Windows which is multitasking (via time slicing). This is also true for OS/2 which I also spent a lot of time with.

I bought version 8 of Ubuntu a few weeks ago. they cleaned up a lot, but after the install, I got the printer to work fine, but Ubuntu could not find my modem (yes its a _regualar_ modem and that modem worked with everything else) and I don't have any other kind of internet access here besides dialup (unless I want to get one of the satellite dish deals, adding up a ton of fees and a two year contract and the legal disclaimers say they don't guarantee anything). So, I'll give MS credit for an OS that really does install on all of my hardware, and always finds all of my peripherals.

One nice thing about Ubuntu is that you can boot up totally off the CDROM and see if it ends up with the gui and you can run the aps without problems. Boot up from the CDROM takes (on my 800 mHz box) about 5-8 minutes. Ap launch is also quite slow, but will work. It absolutely will not boot up on less than 250 mb of ram.

Microsoft has become the ultimate robber-barron with its "activation" and I bought one legal copy of XP which I will run as long as I can but if internet web browsing makes any further advances, I'll consider an Apple Mac before I give Bill Gates & Thugs any more money.

The other problem is whether Apple supplies distibution disks with their computers (in case you need to re-install the OS because of, for example, a corrupted or hacked OS install). And, if you think OS-X is immune to hacking, then just google on "hack OS-X" and get 30,000 hits. Might be resistant to MS viruses, but there is a lot of other malicious code out there that is bad for your box.

Oh, yes, shut off as many of the services as you can or when you re-boot, it may crash (particularly the earlier distros) and make your box unusable without another install from scratch (unless you know how to fix what got screwed up). You could also ruin your RH 5.2 install if you did a shutdown and forgot to unmount a CDROM drive. Happend to me three times.

> Regards,
> Danny

>
>
>
>

# 1805. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-14 22:49:57 UTC
From: #!/bin/bash <devnull@example.com>
Message-ID: <gfkvam$i6s$1@aioe.org>
Source record: 3992

KC7PM wrote:
> I saw something in the last year or two about building a PC that runs
> entirely on 12V and with low power consumption. Does anyone know
> where I can find that article or website?

Oh you can roll your own quite easily. Go to http://www.mini-box.com
and put together a combination of case, system board, and power supply.
You'll need to add memory and disk to it, as well. I'm currently using
an Intel system board (D945GCLF2) which comes with a dual core Atom 330
processor soldered on. I'm running my on 110VAC but it's quite a
capable system board and I wouldn't hesitate to try to build a 12VDC
system around it.

# 1806. Re: Microwave Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 02:39:07 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <1f607ed7-b97b-41aa-9aff-bda58b233daa@s9g2000prm.googlegroups.com>
Source record: 3993

hey scotty:

Really nice I like the page where you are holding a shell of brew. Now that's my kind of operator.

Now that MicroLO board is really sweet it's so large there must be a duplexer on there too, Plus I think I see 5 4 lead devices somewheres on that board with rock bigger than that dime. But tell me this isn't a wideband unit it's just narrow bandwidth? Or maybe your using this for RC control?

73 OM
n8zu

# 1807. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 02:51:25 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <b39a919d-4502-4ee1-a299-46cb1751bd87@s9g2000prm.googlegroups.com>
Source record: 3994

On Nov 14, 1:05 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Getting side tracked by the mention of agency requirements,
> I didn't answer your question.
>
> To answer your question, there is no agency requirement for
> what you're trying to test.  Both input and output are not
> covered by the low voltage directive because they're both
> unsafe to touch.  So the only requirement is operational
> insulation which your test proved.
>
> I also failed to mention that Most standards allow for DC
> testing at 1.414 times the AC voltage required.

Thank you OM my transformer will not pass the 1500VAC test but it does ok at 1350VAC, leakage down to 0,2 nano amps after I got rid of the stray leakage caused by my test set up, always best to zero out the hipot tester first. Thus eliminating the stray leakage. Must have nicked the kapton insulation for it to breakdown at 1500VAC Now I'll have to pot the transformer in epoxy.

73 OM

n8zu

# 1808. Re: Microwave Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 05:23:42 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <491E5CDE.4030707@bloomer.net>
Source record: 3995

raypsi wrote:
> hey scotty:
>
> Really nice I like the page where you are holding a shell of brew. Now
> that's my kind of operator.
>
> Now that MicroLO board is really sweet it's so large there must be a
> duplexer on there too, Plus I think I see 5 4 lead devices somewheres
> on that board with rock bigger than that dime. But tell me this isn't
> a wideband unit it's just narrow bandwidth? Or maybe your using this
> for RC control?
>
> 73 OM
> n8zu

Thanks for the kind words...yes, the microLO is the local oscillator board for my narrowband 10 GHz transverter. Those "U-Shaped" traces are the filters that select the correct harmonic of the crystal oscillator (1136 MHz in the case of the 10 GHz unit). Those 4 legged devices are MMICs (Monolithic Microwave Integrated Circuit) such as MAR-6, MAR-1, etc. They are simple gain blocks with 50 ohm input and output, so they are simple to use (no impedance matching!).

The 10 GHz transverter takes a 2M (ie 144.100) signal in and puts out a signal at 10 GHz (10368.1 MHz with 144.100 in)...it basically adds the final LO frequency (10224.000 MHz) to the 144.xxx sinal and sends it out to the antenna. Works opposite during receive. As can be seen on my webpage, I also have a transverter for 902 MHz and am going to start building units for 1296, 2304 and 3456 MHz. All use the same principle of mixing two frequencies to arrive at a third frequency. You can look at Downeast Microwave's site to see all the neat stuff available these days! http://www.downeastmicrowave.com/

73,
Scott
N0EDV
http://corbenflyer.tripod.com/

# 1809. Re: HiPot testing my filament xformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 07:48:01 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B571253D8E242MDWN@194.177.96.78>
Source record: 3996

Howdy,

Kapton tape is great stuff. It's best to use at least
two full wraps. Some standards for reenforced or double
insulation require three wraps where any two can
withstand the hi-pot. Even where it's not required
the two full wraps minimum is generally a good practice.

The breakdown could be due to insufficient creepage distance
between the windings. If you can build up the bobbin with
tape at both ends to form a barrier which keeps the winding
centered it will help.

Another thing to do is sleeve the wire where it leaves the
winding. A tape "pad" under the lead-out where it crosses
the barrier tape is another option.

Although Kapton is resistant to temperature you're not building
with an insulation system where the components have been aged
with each other at high temperature in oxygen to see if there's
any degredation due to chemical reactions. So the temperature
rise of the transformer should be limited to 65C above ambient.
If it's too hot to hold your finger on for about three seconds
it's too hot. I'd call it a rule of thumb but I'd use the
index finger for that test.

A person should to follow the applicable standards under fear
of fire, injury or death. And as always, all of the above may
be horribly wrong.

73,
Grumpy

## 1810. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 16:20:40 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <62e2cb0e-90c6-42ee-a80b-9ace32b89730@u29g2000pro.googlegroups.com>
Source record: 3997
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew

> What has a ready made module got to do with home brew?
> Steve H

SteveH, it has everything to do with home brew... if your goal is to substantially increase the performance of your rig.
www.telstar-electronics.com

# 1811. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 19:10:03 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <wsCdnXAGXr3jg4LUnZ2dnUVZ_oLinZ2d@web-ster.com>
Source record: 3998

exray wrote:
> Hi,
> I've gotten far enough along with this project to where I'm ready to
> toss it out for public scrutiny, so have at me, guys.
>
> I'm a receiver guy - never built a tube transmitter from scratch and
> this is my first go. My goals were, in no particular order, to build
> something with a early 30s breadboard look, xtal control, 40/20 meters
> primarily - 80/30 as bonus, moderate power for getting on the air
> barefoot while not overpowering a future amp idea...and of course using
> accessible parts.
>
> This is sort of my compilation of ideas from old QST articles. Robbed
> ideas from this and that to make them fit. I made some major boo-boos
> at first but I think I finally have them sorted out. Something that
> dawned on me a little bit slowly is that none of those old xmtrs were
> set up to operate 40 meters with a 7 Mc xtal. Much of the emphasis was
> on double this/double that. Nowadays we have 7 and 14 Mc fundamental
> xtals abounding so I went the route of reinventing the wheel so to speak.
>
> The rig is working at this stage...at least straight thru on 40. Waiting
> for some other bits and bobs to carry on to other bands. The note
> sounds good and its nothing I'm reluctant to put on the air. On the
> other hand its a massive amount of wood and metal for a measly 5 or 6
> watts :) A little slatboard 6V6 chirper would have been much easier.
>
> Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
> comments, questions, critiques, etc. Flame suit is handy!
>
> Schematic:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/schema111108.jpg
>
> View:
> http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>
>
> -Bill WX4A/KP4

Nothing that pretty can possibly work.

:-)

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 1812. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 22:57:39 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <gfnk50$ner$1@news.albasani.net>
Source record: 3999

Tel star Electronics briangriffey@sbcglobal.net
<briangriffey@sbcglobal.net> wrote:
>> What has a ready made module got to do with home brew?
>> Steve H
>
> SteveH, it has everything to do with home brew... if your goal is to
> substantially increase the performance of your rig.
> www.telstar-electronics.com
>
Most people would build one rather than buy one and many would even
design one based on RF processing as this would be far better for
amateur use.

You would be far better off targeting gullible CB users.

Steve H

# 1813. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-15 23:11:49 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <oKCdnX4MGJ2oyoLUnZ2dnUVZ_j2dnZ2d@bright.net>
Source record: 4000

Stev eH wrote:
> Tel star Electronics briangriffey@sbcglobal.net
> <briangriffey@sbcglobal.net> wrote:
>
>>> What has a ready made module got to do with home brew?
>>> Steve H

Actually, those little voice recorder modules that Radio Shack used to sell (don't know if they still do) was used in my homebrew 2M foxhunt transmitter for voice ID on FM...

Scott

# 1814. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 00:35:39 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <EPJTk.66346$Ep1.55496@bignews2.bellsouth.net>
Source record: 3851

Tim Shoppa wrote:
> On Nov 1, 4:23 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
>> We had one of these irons at work and replaced it with a WTCP
>> station.
>
> I cannot say how much I love the WTCP's for being a rugged reliable
> workhorse.
>
> Tim N3QE
I went through two WTCP's. They worked ok, but eventually got intermittent and would not stay hot. I now have a WES51/PES51 setup. No more changing tips to change temperature, just dial it in. No led display, but the dial is calibrated close enough. Also the soldering pencil is lighter and less bulky than the WTCP was. Still I did like the WTCP's all in one construction over the two piece (power supply and iron stand) of the 'ES51. The Coper group has destroyed Weller. I collect old Weller guns whenever I find them, the new ones SUCK.

# 1815. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 01:19:00 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <12bf1192-4c25-4628-86f0-0ff72d87767b@u18g2000pro.googlegroups.com>
Source record: 3852

On Nov 15, 2:10 pm, Tim Wescott <t...@seemywebsite.com> wrote:
> exray wrote:
> > Hi,
> > I've gotten far enough along with this project to where I'm ready to
> > toss it out for public scrutiny, so have at me, guys.
>
> > I'm a receiver guy - never built a tube transmitter from scratch and
> > this is my first go.  My goals were, in no particular order, to build
> > something with a early 30s breadboard look, xtal control, 40/20 meters
> > primarily - 80/30 as bonus, moderate power for getting on the air
> > barefoot while not overpowering a future amp idea...and of course using
> > accessible parts.
>
> > This is sort of my compilation of ideas from old QST articles.  Robbed
> > ideas from this and that to make them fit.  I made some major boo-boos
> > at first but I think I finally have them sorted out.  Something that
> > dawned on me a little bit slowly is that none of those old xmtrs were
> > set up to operate 40 meters with a 7 Mc xtal.  Much of the emphasis was
> > on double this/double that.  Nowadays we have 7 and 14 Mc fundamental
> > xtals abounding so I went the route of reinventing the wheel so to speak.
>
> > The rig is working at this stage...at least straight thru on 40. Waiting
> > for some other bits and bobs to carry on to other bands.  The note
> > sounds good and its nothing I'm reluctant to put on the air.  On the
> > other hand its a massive amount of wood and metal for a measly 5 or 6
> > watts :)  A little slatboard 6V6 chirper would have been much easier.
>
> > Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
> > comments, questions, critiques, etc.  Flame suit is handy!
>
> > Schematic:
> >http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/schema111108...
>
> > View:
> >http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>
> > -Bill WX4A/KP4
>
> Nothing that pretty can possibly work.
>
> :-)
>
> --
>

> Tim Wescott
> Wescott Design Serviceshttp://www.wescottdesign.com
>
> Do you need to implement control loops in software?
> "Applied Control Theory for Embedded Systems" gives you just what it says.
> See details athttp://www.wescottdesign.com/actfes/actfes.html- Hide quoted text -
>
> - Show quoted text -

Looks like something I found in my grandfather's car house. His was a wood frame with copper sheeting. He said he built it a few years before WWII. We cleaned it up and he fired it up and he lit up a little light bulb so I'm figuring 3 or 4 watts. After that I polished up the copper and really cleaned it up and fired it up one more time. He ran a depot for the railroad and was always going to get his ham ticket but never did though he knew morse code extremely well and built several transmitters and receivers.

Jimmie

# 1816. Re: mechanical coil switching of two coils`

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 01:58:39 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <S4LTk.3645$Lv6.3051@bignews8.bellsouth.net>
Source record: 3853

Tim Shoppa wrote:
> On Nov 13, 12:26 pm, Ross Tucker <rjtu...@gmail.com> wrote:
>> I am almost ready to begin fabrication of a new transmitter that I
>> have been working on for a long time now. However, one detail is still
>> eluding me- I would like to use a single rotary switch to select taps
>> on two different coils. In-line ganged switching would be inconvenient
>> for my layout. Is it possible to homebrew a mechanical linkage to turn
>> two switches? I have a front panel and metal deck (vacuum tube
>> construction style), so I could mount gears and cams and stuff, and my
>> layout does have a good clear space between the coils, so there is
>> room. My problem is that I have never read anything about doing this
>> and don't know where to begin looking for parts, etc. Again, I have
>> two coils with four taps each for 40, 20, 15, 10m.
>>
>> Thank you very much for any thoughts on this matter.
>
> Look at the parts assortments that Robotics Hobbyists buy, from e.g.
> Jameco and other places. http://www.jameco.com/ search for "robotics".
>
> Berg and Small Parts Inc sell gears and sprockets and roller chain in
> small quantities but they are not cheap. Jameco is cheap.
>
> Sprockets and roller chain or belts are surprisingly effective if not
> all your shafts are in-line.
>
> For low-level switching, using relays controlled by DC voltage busses
> is great. Surplus small relays are available in vast quantities at
> very cheap prices. For non-mechanical switching, diodes can be biased
> on and off by DC voltages to act as switches. But once you get to
> higher level switching (e.g. transmitter tanks) the cheap relays may
> not take the currents or voltages involved. Still, there was an
> article in QST a few months ago that used small relays to change the
> electrical length of a wire antenna, I was a little surprised at how
> do-able it looked.
>
> Tim N3QE
Another good source for gears and sprockets is www.smallparts.com They
have lots of couplers, tubing, tools, etc as well. Great source for
robot prototyping too.

# 1817. Re: mechanical coil switching of two coils`

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 03:02:29 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <0bcd0e38-fd8e-40ce-8610-72258027aa95@k24g2000pri.googlegroups.com>
Source record: 3854

On Nov 13, 12:26 pm, Ross Tucker <rjtu...@gmail.com> wrote:
> I am almost ready to begin fabrication of a new transmitter that I
> have been working on for a long time now. However, one detail is still
Hey Ross:

I would think outside the box, forget a mechanical arrangement, use
the In line ganged to control relay switching.

And if you really want to go mechanical for some strange reason I'd
use a flex shaft. Bend a flex shaft 180 degress and viola'.
I too have thought about this very topic, for my amp I might try pin
diodes since I'm a not using GG.

73 OM
n8zu

> eluding me- I would like to use a single rotary switch to select taps
> on two different coils. In-line ganged switching would be inconvenient
> for my layout. Is it possible to homebrew a mechanical linkage to turn
> two switches? I have a front panel and metal deck (vacuum tube
> construction style), so I could mount gears and cams and stuff, and my
> layout does have a good clear space between the coils, so there is
> room. My problem is that I have never read anything about doing this
> and don't know where to begin looking for parts, etc. Again, I have
> two coils with four taps each for 40, 20, 15, 10m.
>
> Thank you very much for any thoughts on this matter.
>
> 73,
> Ross, NS7F

# 1818. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 03:19:02 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B57D8DD99DA12MDWN@194.177.96.78>
Source record: 3855

Howdy,

I've managed several labs where we had dozens of WTCP stations
in daily use.

The only problem I found with WTCP is the connector between the
base and the cord. I usually remove the connector and hardwire
the cord at the base. It causes the intermittent operation that
you've decribed.

I couldn't agree with you more concerning the damage Cooper
did to the Weller brand. Since they moved production to Mexico
the quality control is nonexistant. Some of the design changes
which I believe were intended as cost reductions were ill advised
too. The old Weller soldering guns are indestructable.

At home I have a Pace soldering/desoldering station and a Metcal
SMT station. I've no complaints other than the price.

At work we have a Hakko soldering/deslodering station and it's a
real work horse. We also have a Metcal SMT station which is a bit
fussy but it has been though hell and back. We just bought a couple
Pace ST70 soldering stations for general purpose work. I think we will
buy a few more, they're great.

It's too bad that Wahl quit selling Sterling soldering irons in
the US. It's an odd little iron but I love it. Thirty years old
and it's still the first iron I reach for in my shop. The original
tip is perfect! I called Wahl about buying a second iron and no one
there knew what I was talking about. The most clever feature is an
aluminum washer between the tip and body of the iron. The difference
in coefficient of expansion keeps the tip from seizing. It says made
in England on the body. Google was no help... sigh.

73,
Grumpy

ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in
news:EPJTk.66346$Ep1.55496@bignews2.bellsouth.net:

>> Tim N3QE
> I went through two WTCP's. They worked ok, but eventually got
> intermittent and would not stay hot. I now have a WES51/PES51 setup.
> No more changing tips to change temperature, just dial it in. No led
> display, but the dial is calibrated close enough. Also the soldering
> pencil is lighter and less bulky than the WTCP was. Still I did like
> the WTCP's all in one construction over the two piece (power supply and

> iron stand) of the 'ES51. The Coper group has destroyed Weller. I
> collect old Weller guns whenever I find them, the new ones SUCK.
>

# 1819. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 04:23:51 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <YbydndoLzKBtAoLUnZ2dnUVZ_sWdnZ2d@earthlink.com>
Source record: 3856

"Grumpy The Mule" <s_foonly@foo.bar> wrote in message
news:Xns9B57D8DD99DA12MDWN@194.177.96.78...
>
>> I couldn't agree with you more concerning the damage Cooper
> did to the Weller brand. Since they moved production to Mexico
> the quality control is nonexistant. Some of the design changes
> which I believe were intended as cost reductions were ill advised
> too. The old Weller soldering guns are indestructable.
>

I have the Weller guns in 3 differant wattage ranges. I think this is one
of each that they made. The 8200 I have is over 40 years old. The middle
wattage gun is one that does not have the hollow nuts that screw into the
end of the rods comming out of the gun. It is labled intermittent duty
where the other 2 do not have this lable. It seems to be lighter than the
smaller rated gun also. I don't use them much any more except to put the
connectors on the PL-259.
I really like the guns for the bigger stuff the pencles will not work. I
even used the 8200 on some of the older and larger PC boards.

# 1820. Re: mechanical coil switching of two coils`

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 06:00:24 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <f4c01f1a-c2af-47a6-947b-f668e9ee2f2d@q26g2000prq.googlegroups.com>
Source record: 3857

On Nov 15, 10:02 pm, raypsi <RBorow...@gmail.com> wrote:
> On Nov 13, 12:26 pm, Ross Tucker <rjtu...@gmail.com> wrote:> I am almost ready to begin fabrication of a new transmitter that I
> > have been working on for a long time now. However, one detail is still
>
Hey Ross:

Then again you could get a roller inductor and forget the glorified
bandswitch arrangement.

73 OM
n8zu

# 1821. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 07:53:26 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <P+e96NG2F9HJFAkD@ifwtech.co.uk>
Source record: 3858

Grumpy The Mule wrote:
>
>I've managed several labs where we had dozens of WTCP stations in daily
>use.
>
>The only problem I found with WTCP is the connector between the base
>and the cord. I usually remove the connector and hardwire the cord at
>the base. It causes the intermittent operation that you've decribed.
>
>I couldn't agree with you more concerning the damage Cooper did to the
>Weller brand. Since they moved production to Mexico the quality
>control is nonexistant. Some of the design changes which I believe
>were intended as cost reductions were ill advised too. The old Weller
>soldering guns are indestructable.
>

I wouldn't be without my TCP, and spares are still available. Cooper Tools in the UK give excellent customer support (though that's the people, not the product).

>At home I have a Pace soldering/desoldering station and a Metcal SMT
>station. I've no complaints other than the price.
>
>At work we have a Hakko soldering/deslodering station and it's a real
>work horse. We also have a Metcal SMT station which is a bit fussy but
>it has been though hell and back. We just bought a couple Pace ST70
>soldering stations for general purpose work. I think we will buy a few
>more, they're great.
>
Also take a look at the JBC range of soldering stations. They are beyond my amateur budget but professional friends rave about them - they seem to do everything the Metcal range can (and more) without the complex and expensive RF heating. There's a video presentation at:
http://uk.youtube.com/watch?v=v2hLFmHTQvo

>It's too bad that Wahl quit selling Sterling soldering irons in the US.
>It's an odd little iron but I love it. Thirty years old and it's still
>the first iron I reach for in my shop. The original tip is perfect! I
>called Wahl about buying a second iron and no one there knew what I was
>talking about. The most clever feature is an aluminum washer between
>the tip and body of the iron. The difference in coefficient of
>expansion keeps the tip from seizing. It says made in England on the
>body. Google was no help... sigh.
>
If you can post a photograph on a website, someone here in the UK may be

able to identify it.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

## 1822. Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 21:21:58 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <b5cabbfd-f220-4c7e-9cef-72146abb5e68@v39g2000pro.googlegroups.com>
Source record: 3859

I want to add a couple of deep discharge type batteries to my truck for camping but how do I intermix them with the normal auto battery and charging system. I was thinking about getting a charger meant for charging batteries from solar panels and connecting the solar panel input to the generator. A 20A charger cost about $50USD .This would be very reasonable if I knew it would work as expected.

Jimmie

## 1823. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 21:42:43 UTC
From: HighlandObserver@gmail.com
Message-ID: <bt41i4tcebp44tl0694j629jbn1be81cnq@4ax.com>
Source record: 3860

Why not use a traditional split charge relay.
Alternator output then becomes the limiting factor

# 1824. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 23:08:46 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B58AE6F762962MDWN@194.177.96.78>
Source record: 3861

Howdy,

Thank you for the suggestion. I have posted an image of the
iron at www.dwave.net/~twomules/sterling_iron.jpg

The manufacturer's name is Sterling and it's marked made in
England. The handle is tri-lobular in cross section. In the
handle there is a thermostat which is adjusted by means ofan
allen key and there is a neon bulb indicating the heater status.

I'd like to know if it's still being manufactured.

73,
Grumpy

Ian White GM3SEK <gm3sek@ifwtech.co.uk> wrote in
news:P+e96NG2F9HJFAkD@ifwtech.co.uk:

SNIP
> If you can post a photograph on a website, someone here in the UK may be
> able to identify it.
>
>

# 1825. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 23:29:19 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B58B1EAA956F2MDWN@194.177.96.78>
Source record: 3862

Hello Jimmie,

I've used a relay to disconnect the auxilliary battery when either
the ignition is off or the auxilliary battery voltage is low ~11.5V.
There is a series diode and resistor in parallel with the relay
contacts to bring the auxilliary battery back up slowly when the
engine is running so the undervoltage lockout can reclose the relay
and not dump the discharged battery on the alternator.

The automotive "ice cube" relays are good for this I've seen some
rated as high as 80A.

Another refinement I did not try is a switch to override the undervoltage
lockout so I could jump the vehicle off the auxillary battery. Perhaps
the switch should be across the diode so the auxillary battery slowly
charges the main battery?

73,
Grumpy

JIMMIE <jimmie68@gmail.com> wrote in news:b5cabbfd-f220-4c7e-9cef-
72146abb5e68@v39g2000pro.googlegroups.com:

> I want to add a couple of deep discharge type batteries to my truck
> for camping but how do I intermix them with the normal auto battery
> and charging system. I was thinking about getting a charger meant for
> charging batteries from solar panels and connecting the solar panel
> input to the generator. A 20A charger cost about $50USD .This would be
> very reasonable if I knew it would work as expected.
>
> Jimmie
>

## 1826. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-16 23:30:55 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B58B230598522MDWN@194.177.96.78>
Source record: 3863

Grumpy The Mule <s_foonly@foo.bar> wrote in
news:Xns9B58B1EAA956F2MDWN@194.177.96.78:

A correction...

> Another refinement I did not try is a switch to override the _ignition_
> lockout so I could jump the vehicle off the auxillary battery. Perhaps
> the switch should be across the diode so the auxillary battery slowly
> charges the main battery?

# 1827. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 08:31:41 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <4inwt7LtvSIJFAqN@ifwtech.co.uk>
Source record: 3864

Grumpy The Mule wrote:
>Howdy,
>
>Thank you for the suggestion. I have posted an image of the
>iron at www.dwave.net/~twomules/sterling_iron.jpg
>
>The manufacturer's name is Sterling and it's marked made in
>England. The handle is tri-lobular in cross section. In the
>handle there is a thermostat which is adjusted by means ofan
>allen key and there is a neon bulb indicating the heater status.
>
>I'd like to know if it's still being manufactured.
>

I used to have one of those, but it didn't last as well as yours did so
it's long gone... along with all memory of the name!

Cross-posted to the good people at uk.d-i-y, some of whom have a
bottomless memory about old tools.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

# 1828. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 10:37:01 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <5b2dba02-9143-4e84-bc46-934e0716e6a2@1g2000prd.googlegroups.com>
Source record: 3865

> Most people would build one rather than buy one and many would even
> design one based on RF processing as this would be far better for
> amateur use.
>
> You would be far better off targeting gullible CB users.
> Steve H

SteveH, sorry you have such a low opinion of CB operators... I don't
believe they think much of you either... lol
www.telstar-electronics.com

# 1829. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 12:14:43 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <JCw8VCazAWIJFAOj@ifwtech.co.uk>
Source record: 3866

Ian White GM3SEK wrote:
>Grumpy The Mule wrote:
>>Howdy,
>>
>>Thank you for the suggestion. I have posted an image of the
>>iron at www.dwave.net/~twomules/sterling_iron.jpg
>>
>>The manufacturer's name is Sterling and it's marked made in
>>England. The handle is tri-lobular in cross section. In the
>>handle there is a thermostat which is adjusted by means ofan
>>allen key and there is a neon bulb indicating the heater status.
>>
>>I'd like to know if it's still being manufactured.
>>
>
>I used to have one of those, but it didn't last as well as yours did so
>it's long gone... along with all memory of the name!
>
>Cross-posted to the good people at uk.d-i-y, some of whom have a
>bottomless memory about old tools.

Oh boy, do they ever! Thirteen replies already, all heavily laden with soldering iron nostalgia... this thread will run and run.

One of them was even the right answer. From Jeff Layman:
>
>It's an Oryx 50.

Yes, that's the one I used to have.

>The name should be on the opposite side to that shown in the photo. Has
>interchangeable tips, is thermostically controlled, and the temperature
>is ajustable (up to 400ï¿½C), by mans of a hex key (1/16"?) set in a
>small plastic handle. I've had mine over 40 years, and it's still
>going strong.
>
>Mine doesn't have "Made in England" - just "Model 50; 220-240v. 50w". I
>guess the MiE was for the US market, as the iron was made in 24, 50,
>115, and 210/250v versions.
>

A bit of further Googling reveals that the Oryx tradename is still in use, apparently owned by an Irish company named Portasol which now specialises in gas-fueled irons (www.portasol.com).

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

# 1830. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 13:55:20 UTC
From: John Robert McFerren <robbie.mcferren@gmail.com>
Message-ID: <gfrt4m$one$1@aioe.org>
Source record: 3867

HighlandObserver@gmail.com wrote:

> Why not use a traditional split charge relay.
> Alternator output then becomes the limiting factor
I'm not familiar with the term split charge relay, but if it is what is referred to as a "Battery Isolator" then I actually like the idea. A good isolator will charge the starting battery first then it will take leftover power to charge the other battery. Combine this with solar power and you have a winning combination in my book.

# 1831. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 17:06:28 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <8795bf5a-715c-4a24-8290-ab69d748782a@e1g2000pra.googlegroups.com>
Source record: 3868

On Nov 16, 4:42 pm, HighlandObser...@gmail.com wrote:
> Why not use a traditional split charge relay.
> Alternator  output then becomes the limiting factor

I didnt think you could charge a deep cycle battery in an
automotive system without damaging the battery. Its my understanding
that car batteries are designed for a quick charge at realativly high
current while deep cycle batteries require a long low current charge.
To make it work thought you had to have a special charge regulator for
the deep cycle battery.

Jimmie

# 1832. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 18:11:43 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B597C127AF762MDWN@194.177.96.78>
Source record: 3869

Howdy,

Thanks Ian! Sounds like I'm out of luck on buying
a new Oryx 50. The writing on the handle is nearly
worn off. Now I can see why the people at Wahl didn't
know what I was talking about. I had it all wrong.

DOH! I Should have looked carefully at the stand!
It plainly reads ORYX and below that Reading England.
The name is moulded into the black plastic base but
not painted or ink stamped. I just never noticed it
before.

Wahl is still selling their battery powered soldering
iron. I used to own one of those until the nicad's
went bad. They're in Sterling Ill.

73,
Grumpy

# 1833. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 18:58:18 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B5983F85FB342MDWN@194.177.96.78>
Source record: 3870

Howdy,

What type of deep discharge battery do you mean?
Gell vs AGM vs VRLA vs Flooded battery generally
require different care.

I use low maintenance flooded deep disharge batteries
and charge them at 20% of their AHr capacity rating.
I'd have no worries about mounting one of these remotely
from the alternator (like in the trunk) and letting the
vehicle system charge it.

Gell or AGM I'd charge at 10% capacity or less. These
would require some current limiting circuit.

The volts per cell for full charge and float charge will be
different too. Though if you keep the battery between 80%
and 20% of full charge it's not an issue.

73,
Grumpy

JIMMIE <jimmie68@gmail.com> wrote in news:8795bf5a-715c-4a24-8290-
ab69d748782a@e1g2000pra.googlegroups.com:

> On Nov 16, 4:42 pm, HighlandObser...@gmail.com wrote:
>> Why not use a traditional split charge relay.
>> Alternator output then becomes the limiting factor
>
> I didnt think you could charge a deep cycle battery in an
> automotive system without damaging the battery. Its my understanding
> that car batteries are designed for a quick charge at realativly high
> current while deep cycle batteries require a long low current charge.
> To make it work thought you had to have a special charge regulator for
> the deep cycle battery.
>
> Jimmie

# 1834. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 19:18:34 UTC
From: JB <nospam@goofball.net>
Message-ID: <esjUk.1137$4g5.953@nwrddc01.gnilink.net>
Source record: 3871

"JIMMIE" <jimmie68@gmail.com> wrote in message
news:b5cabbfd-f220-4c7e-9cef-72146abb5e68@v39g2000pro.googlegroups.com...
> I want to add a couple of deep discharge type batteries to my truck
> for camping but how do I intermix them with the normal auto battery
> and charging system. I was thinking about getting a charger meant for
> charging batteries from solar panels and connecting the solar panel
> input to the generator. A 20A charger cost about $50USD .This would be
> very reasonable if I knew it would work as expected.
>
> Jimmie

If the RV isn't being used all the time the Battery chemistry is less of an issue. Deep cycles should be charged at roughly no more than 10 amps. and floated at 13.2 v. But if it is being cycled, the float value is less of an issue. You will need the long trip to insure it is up for the next stop.

If you are mounting the second battery under the hood, close to the charger, then it is best to use NR 10 or 12 wire for the charge line to limit the current and be able to disable the RV relay rather than leave it charging every day on long commutes. You will need to check the water more often.

I didn't see my earlier post, again DON'T use a solar charge controller as most regulate by shorting down the solar panel. If the system voltage is normal, nothing happens. If it should go high for any reason then it would simply burn out things.

# 1835. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 19:46:46 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <dW15AzhmoclJFAtK@ifwtech.co.uk>
Source record: 3872

Grumpy The Mule wrote:
>Howdy,
>
>
>Thanks Ian! Sounds like I'm out of luck on buying
>a new Oryx 50. The writing on the handle is nearly
>worn off. Now I can see why the people at Wahl didn't
>know what I was talking about. I had it all wrong.
>
>DOH! I Should have looked carefully at the stand!
>It plainly reads ORYX and below that Reading England.
>The name is moulded into the black plastic base but
>not painted or ink stamped. I just never noticed it
>before.
>
>Wahl is still selling their battery powered soldering
>iron. I used to own one of those until the nicad's
>went bad. They're in Sterling Ill.
>
Ah, too bad. Here's another picture of the genuine article:

>>Someone in the USA would like to identify this old British made
>>soldering iron:
>
>As others have said - Oryx
>Photo of mine (with stand - sponge missing) at:-
>http://www.diy.110mb.com/oryx.jpg
>

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

## 1836. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 21:08:08 UTC
From: JB <nospam@goofball.net>
Message-ID: <Y2lUk.1149$4g5.951@nwrddc01.gnilink.net>
Source record: 3873

> >Wahl is still selling their battery powered soldering
> >iron. I used to own one of those until the nicad's
> >went bad. They're in Sterling Ill.

I have had one since 79' and is on it's 5th set of batteries. I replaced the last set with 3ah NiMH and they never seem to go down now and has a permanent place in my field case.

# 1837. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 22:19:59 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <0309608e-8c61-4bac-a667-a00320bc3e93@q26g2000prq.googlegroups.com>
Source record: 3874

On Nov 17, 1:58 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> What type of deep discharge battery do you mean?
> Gell vs AGM vs VRLA vs Flooded battery generally
> require different care.
>
> I use low maintenance flooded deep disharge batteries
> and charge them at 20% of their AHr capacity rating.
> I'd have no worries about mounting one of these remotely
> from the alternator (like in the trunk) and letting the
> vehicle system charge it.
>
> Gell or AGM I'd charge at 10% capacity or less.  These
> would require some current limiting circuit.
>
> The volts per cell for full charge and float charge will be
> different too.  Though if you keep the battery between 80%
> and 20% of full charge it's not an issue.
>
> 73,
> Grumpy
>
> JIMMIE <jimmi...@gmail.com> wrote in news:8795bf5a-715c-4a24-8290-
> ab69d7487...@e1g2000pra.googlegroups.com:
>
>
>
> > On Nov 16, 4:42 pm, HighlandObser...@gmail.com wrote:
> >> Why not use a traditional split charge relay.
> >> Alternator  output then becomes the limiting factor
>
> > > I didnt think you could charge a deep cycle battery in an
> > > automotive system without damaging the battery. Its my understanding
> > > that car batteries are designed for a quick charge at realativly high
> > > current while deep cycle batteries require a long low current charge.
> > > To make it work thought you had to have a special charge regulator for
> > > the deep cycle battery.
>
> > > Jimmie- Hide quoted text -
>
> - Show quoted text -

Im not sure but they are sealed 100Ahr batteries and the max recharge rate is 10amps so definitly not FLOOD.
I have recharged them from my aux power connector in my truck bed but this took a lot more care and effort than I wanted to give. Wife and kid thought I was paying more attention to the batteries than them.. I thought about feeding them from a constant current source. In this case it would act more like a current limiter.

Jimmie

# 1838. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-17 23:52:43 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B59B5E27331E2MDWN@194.177.96.78>
Source record: 3875

Howdy,

Ok, the minimum you'd need to charge these is a voltage and
current regulated supply limited to less than 10A and 13.62
for AGM or 13.50 for gell (check the manufacturer's stated
the float voltage). No more than 14.1V in any case.

The vehicle voltage is not much higer than this with the
engine is running. It's possible to build a low drop linear
regulator to serve this function. Linear Technology or Micrel
should have an app note you can work from. This is the one
device solution. You'll get a couple of hundred milliamps
to an amp at 13.6V from as low as 14V maybe a bit less.
Good for keeping the auxilliary battery topped off but not
so good for recharging.

If you want faster recharge (which still won't be very fast
since 120%-140% of 100Ahr is is going to take 12H-14Hr at 10A)
I suggest a SMPS running off the vehicle battery it can charge
the gell cell even when the engine isn't running.

Try National Semiconductor's Web Bench power design tool and
roll your own with their parts.
http://www.national.com/appinfo/power/webench.html

For minimum recharge time a bigger SMPS (maybe a nice push-pull)
is required. I might try a simple switcher boost converter or
switched capacitor converter and raise the vehicle supplied
voltage to about 24V at a few milliamps to bias a series pass
MOSFET linear regulator. The output current and drop-out
voltage are then only limited by the mosfet pass device(s)
... virtually unlimited! Though not as efficient as the
switcher. Maybe a good idea to throttle back the current
limit from 10A when the engine is running to a few hundred
milliamps when it is not. Though even that's too much if the
vehicle sits unused for too long.

Which causes me to ponder... you'll drain the vehicle battery
unless the engine is running. Even at 10A charge current a
full recharge requires a fair amout of driving! Perhaps it's
better to plan on recharging the battery from "dock side" power
and only trickle charge the battery from the vehicle to keep
it topped off. One of the low drop regulator IC's set to 13.6V
or a simple switcher(tm) would be all you need for that.

73,
Grumpy

JIMMIE <jimmie68@gmail.com> wrote in news:0309608e-8c61-4bac-a667-a00320bc3e93@q26g2000prq.googlegroups.com:

> Im not sure but they are sealed 100Ahr batteries and the max recharge
> rate is 10amps so definitly not FLOOD.
> I have recharged them from my aux power connector in my truck bed but
> this took a lot more care and effort than I wanted to give. Wife and
> kid thought I was paying more attention to the batteries than them.. I
> thought about feeding them from a constant current source. In this
> case it would act more like a current limiter.
>
> Jimmie
>

# 1839. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 00:28:07 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <355e6bae-ab52-4d0e-8fde-ffa06fec1d7d@c36g2000prc.googlegroups.com>
Source record: 3876

On Nov 16, 4:21 pm, JIMMIE <jimmi...@gmail.com> wrote:
> I want to add a couple of deep discharge type batteries to my truck
> for camping but how do I intermix them with the normal auto battery
> and charging system. I was thinking about getting a charger meant for
> charging batteries from solar panels and connecting the solar panel
> input to the generator. A 20A charger cost about $50USD .This would be
> very reasonable if I knew it would work as expected.
>
> Jimmie

Hey jimmie:

TI makes a really sweet ic for charging batteries the UC3906. Is the greatest IC since sliced bread for charging batteries. It took forever to charge my deep cycle marine battery like a110AHr. A straight charger it would take a week to charge 100% it's that last 15% that's the toughest. The UC3906 charged my deep cycle marine battery to full charge from dead in 10 hours. It's one of the greatest homebrew jobs I've done. I used it to charge a 110AHr deep cycle marine battery for my electric bike. I could ride 2 days on a single charge like $0.25 worth of electricty back and forth to work. 45 miles on a single charge.

73 OM
n8zu

# 1840. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 00:41:36 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B59BE2C59F02MDWN@194.177.96.78>
Source record: 3877

Agreed! I designed a DC UPS power supply for Harris using the
UC3906 to charge a 4Ahr gell cell for wireless pbx. The only
down side is it requires some head voltage for the regulator,
so it won't work well off a 12V vehicle system unless the engine
is running and then not so great.

I still have two of those Harris power supplies one runs an HT
monitoring a repeater and the other runs a scanner and a small
transmitter. The batteries are ten years old and show little
loss of capacity.

raypsi <RBorowiak@gmail.com> wrote in news:355e6bae-ab52-4d0e-8fde-
ffa06fec1d7d@c36g2000prc.googlegroups.com:

> TI makes a really sweet ic for charging batteries the UC3906. Is the
> greatest IC since sliced bread for charging batteries. It took forever
> to charge my deep cycle marine battery like a110AHr. A straight
> charger it would take a week to charge 100% it's that last 15% that's
> the toughest. The UC3906 charged my deep cycle marine battery to full
> charge from dead in 10 hours. It's one of the greatest homebrew jobs
> I've done. I used it to charge a 110AHr deep cycle marine battery for
> my electric bike. I could ride 2 days on a single charge like $0.25
> worth of electricty back and forth to work. 45 miles on a single
> charge.
>
> 73 OM
> n8zu
>

# 1841. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 06:13:12 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <1fa6ec49-6eab-4cb6-8eeb-2ad47bd5e460@w1g2000prk.googlegroups.com>
Source record: 3878

On Nov 17, 7:41 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Agreed!  I designed a DC UPS power supply for Harris using the
> UC3906 to charge a 4Ahr gell cell for wireless pbx.  The only
> down side is it requires some head voltage for the regulator,
> so it won't work well off a 12V vehicle system unless the engine
> is running and then not so great.
>
> I still have two of those Harris power supplies one runs an HT
> monitoring a repeater and the other runs a scanner and a small
> transmitter.  The batteries are ten years old and show little
> loss of capacity.
>
> raypsi <RBorow...@gmail.com> wrote in news:355e6bae-ab52-4d0e-8fde-
> ffa06fec1...@c36g2000prc.googlegroups.com:
>
>
>
> > TI makes a really sweet ic for charging batteries the UC3906. Is the
> > greatest IC since sliced bread for charging batteries. It took forever
> > to charge my deep cycle marine battery like a110AHr. A straight
> > charger it would take a week to charge 100% it's that last 15% that's
> > the toughest. The UC3906 charged my deep cycle marine battery to full
> > charge from dead in 10 hours. It's one of the greatest homebrew jobs
> > I've done. I used it to charge a 110AHr deep cycle marine battery for
> > my electric bike. I could ride 2 days on a single charge like $0.25
> > worth of electricty back and forth to work. 45 miles on a single
> > charge.
>
> > 73 OM
> > n8zu- Hide quoted text -
>
> - Show quoted text -

I think I am going to try charging it through a 10 amp constant
current source. If it works the way I am thinking as the battery nears
full charge the pass transistor should saturate applying nearly full
generator voltage across the battery topping off the battery. Im
thinking(hoping) that when this occours the voltage drop across the
transistor may be just enough to yield nearly the ideal float voltage
for the batteries.
The batteries normally power my heater and lights for my popup camper
and a couple of radios that are mostly used for rx. With only an
initial charge from the battey charger before leaving home I can camp
about 4 days. With some additioal charging I am hoping to extend it

another 2 oor 3 days. Since our trips usually include a few hours a day of driving I thought I would use this oppurtunity to top off the batteries. I have leaned against the idea of just running the engine for that purpose. The incandescent bulbs I am using in the camper are the main draw on the batteries perhaps going to LEDs would help.

# 1842. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 07:46:24 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B5A120DDA5BA2MDWN@194.177.96.78>
Source record: 3879

Howdy,

The saturation voltage will probably be less than a volt,
likely only a few tenths of a volt. When the vehicle is
running the output voltage could be too high. A transistor
that comfortably handles the ten amps is going to be something
like a 2N2955 or 2N3055 there are curves on the data sheets
that tell the story. As the current souce runs out of compliance
and the current drops, the output voltage rises because the
saturation voltage decreases.

There is an easy fix if you use a PNP pass transistor. Clamp
the base at 13.6V plus a base emitter drop, say 0.8V, the output
can't rise higher than the float voltage.

Better yet, use a TL431 to sense the battery voltage to end the
constant current charge by reducing the bias and enter float mode.
(The TL431 is a very handy device and cheap. Check the app notes
and I'm sure you'll find many other uses for it.) Then either NPN
or PNP will work, choose your poison.

I modified a junky old eight amp Kmart charger like this with a
PNP device for charging the six volt battery in my tractor.

You'll need some sort of short circuit protection. During a short
the ten amps times the supply voltage will be dissipated in the pass
device. Could be a fuse or breaker or active protection. I left
this out of my first attempt and the pass device didn't like being
shorted for even a moment. Luckily I tested this before putting it
all back together rather than finding out later on in a snow storm.
The existing thermal breaker was much too slow.

LEDs would be a huge improvement.

73,
Grumpy

JIMMIE <jimmie68@gmail.com> wrote in news:1fa6ec49-6eab-4cb6-8eeb-
2ad47bd5e460@w1g2000prk.googlegroups.com:

> I think I am going to try charging it through a 10 amp constant
> current source. If it works the way I am thinking as the battery nears
> full charge the pass transistor should saturate applying nearly full
> generator voltage across the battery topping off the battery. Im
> thinking(hoping) that when this occours the voltage drop across the
> transistor may be just enough to yield nearly the ideal float voltage
> for the batteries.

> The batteries normally power my heater and lights for my popup camper
> and a couple of radios that are mostly used for rx. With only an
> initial charge from the battey charger before leaving home I can camp
> about 4 days. With some additioal charging I am hoping to extend it
> another 2 oor 3 days. Since our trips usually include a few hours a
> day of driving I thought I would use this oppurtunity to top off the
> batteries. I have leaned against the idea of just running the engine
> for that purpose. The incandescent bulbs I am using in the camper are
> the main draw on the batteries perhaps going to LEDs would help.
>

# 1843. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 09:44:01 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <bd86116f-bbc7-42a3-b414-bb8b224666ca@35g2000pry.googlegroups.com>
Source record: 3880

On Nov 18, 2:46 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> The saturation voltage will probably be less than a volt,
> likely only a few tenths of a volt.  When the vehicle is
> running the output voltage could be too high.  A transistor
> that comfortably handles the ten amps is going to be something
> like a 2N2955 or 2N3055 there are curves on the data sheets
> that tell the story. As the current souce runs out of compliance
> and the current drops, the output voltage rises because the
> saturation voltage decreases.
>
> There is an easy fix if you use a PNP pass transistor.  Clamp
> the base at 13.6V plus a base emitter drop, say 0.8V, the output
> can't rise higher than the float voltage.
>
> Better yet, use a TL431 to sense the battery voltage to end the
> constant current charge by reducing the bias and enter float mode.
> (The TL431 is a very handy device and cheap.  Check the app notes
> and I'm sure you'll find many other uses for it.)  Then either NPN
> or PNP will work, choose your poison.
>
> I modified a junky old eight amp Kmart charger like this with a
> PNP device for charging the six volt battery in my tractor.
>
> You'll need some sort of short circuit protection.  During a short
> the ten amps times the supply voltage will be dissipated in the pass
> device.  Could be a fuse or breaker or active protection.  I left
> this out of my first attempt and the pass device didn't like being
> shorted for even a moment.  Luckily I tested this before putting it
> all back together rather than finding out later on in a snow storm.
> The existing thermal breaker was much too slow.
>
> LEDs would be a huge improvement.
>
> 73,
> Grumpy
>
> JIMMIE <jimmi...@gmail.com> wrote in news:1fa6ec49-6eab-4cb6-8eeb-
> 2ad47bd5e...@w1g2000prk.googlegroups.com:
>
>
>
> > I think I am going to try charging it through a 10 amp constant

> > current source. If it works the way I am thinking as the battery nears
> > full charge the pass transistor should saturate applying nearly full
> > generator voltage across the battery topping off the battery. Im
> > thinking(hoping) that when this occours the voltage drop across the
> > transistor may be just enough to yield nearly the ideal float voltage
> > for the batteries.
> > The batteries normally power my heater and lights for my popup camper
> > and a couple of radios that are mostly  used for rx. With only an
> > initial charge from the battey charger before leaving home I can camp
> > about 4 days. With some additioal charging I am hoping to extend it
> > another 2 oor 3 days. Since our trips usually include a few hours a
> > day of driving I thought I would use this oppurtunity to top off the
> > batteries. I have leaned against the idea of just running the engine
> > for that purpose. The incandescent bulbs I am using in the camper are
> > the main draw on the batteries perhaps going to LEDs would help.- Hide quoted text -
>
> - Show quoted text -

Saturation voltage my oh my. A simple DC to DC convertor on the gate
of a FET of like 4 milli ohm so no more Vsat. I've done it with the
UC3906 which is designed to charge lead acid. All you need is a source
that'll will handle all that current. All the tricks I've seen done
with lead acid charging constant current will fawk up ur battery
unless you know when to shut it off like the UC3906 does.
Maybe 3 TL431's as sensors and you can do it. But the UC3906 can
sense a shorted cell and will not charge the battery if there is a
shorted cell.

73 OM
n8zu

# 1844. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 10:30:54 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <07e60cd4-2a83-4d86-8f86-d86c8463fc3e@c22g2000prc.googlegroups.com>
Source record: 3881

On Oct 31, 5:47 pm, "Ralph Mowery" <rmowery28...@earthlink.net> wrote:
> I was given this Weller soldering station.  The display is not working.  It
> does flash 888 on it when first turned on.  The tip does heat up, but I have
> not determined if I can vary the heat or not.  Also have an extra soldering
> pencle that plugs in it.  Changed them to see if the display would light,
> but it didnot.  Any hints on it ?

They gave it to you because Weller stuff is junk. I have seen more
Weller soldering stations fail then I care to remember over the years.
Don't spend a lot of time on it. Break down and buy a Hexacon station.
We have four here. They have worked flawlessly for over ten years with
heavy use.

# 1845. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 11:46:35 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <4922ab11$1@clear.net.nz>
Source record: 3882

JIMMIE wrote:

> On Nov 15, 2:10 pm, Tim Wescott <t...@seemywebsite.com> wrote:
>
>>exray wrote:
>>
>>>Hi,
>>>I've gotten far enough along with this project to where I'm ready to
>>>toss it out for public scrutiny, so have at me, guys.
>>
>>>I'm a receiver guy - never built a tube transmitter from scratch and
>>>this is my first go. My goals were, in no particular order, to build
>>>something with a early 30s breadboard look, xtal control, 40/20 meters
>>>primarily - 80/30 as bonus, moderate power for getting on the air
>>>barefoot while not overpowering a future amp idea...and of course using
>>>accessible parts.
>>
>>>This is sort of my compilation of ideas from old QST articles. Robbed
>>>ideas from this and that to make them fit. I made some major boo-boos
>>>at first but I think I finally have them sorted out. Something that
>>>dawned on me a little bit slowly is that none of those old xmtrs were
>>>set up to operate 40 meters with a 7 Mc xtal. Much of the emphasis was
>>>on double this/double that. Nowadays we have 7 and 14 Mc fundamental
>>>xtals abounding so I went the route of reinventing the wheel so to speak.
>>
>>>The rig is working at this stage...at least straight thru on 40. Waiting
>>>for some other bits and bobs to carry on to other bands. The note
>>>sounds good and its nothing I'm reluctant to put on the air. On the
>>>other hand its a massive amount of wood and metal for a measly 5 or 6
>>>watts :) A little slatboard 6V6 chirper would have been much easier.
>>
>>>Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
>>>comments, questions, critiques, etc. Flame suit is handy!
>>
>>>Schematic:
>>>http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/schema111108...
>>
>>>View:
>>>http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>>
>>>-Bill WX4A/KP4
>>
>>Nothing that pretty can possibly work.
>>

>>:-)
>>
>>--
>>
>>Tim Wescott
>>Wescott Design Serviceshttp://www.wescottdesign.com
>>
>>Do you need to implement control loops in software?
>>"Applied Control Theory for Embedded Systems" gives you just what it says.
>>See details athttp://www.wescottdesign.com/actfes/actfes.html- Hide quoted text -
>>
>>- Show quoted text -
>
>
> Looks like something I found in my grandfather's car house. His was a
> wood frame with copper sheeting. He said he built it a few years
> before WWII. We cleaned it up and he fired it up and he lit up a
> little light bulb so I'm figuring 3 or 4 watts. After that I polished
> up the copper and really cleaned it up and fired it up one more time.
> He ran a depot for the railroad and was always going to get his ham
> ticket but never did though he knew morse code extremely well and
> built several transmitters and receivers.
>
>
> Jimmie
Very Nice Tim OM!
A few years back I built an 80M rig from a 1928 QST design.
A bit bigger than that basically a T20 triode driving (I think)a 100TH
Colpitts oscillator and power amplifier. It worked surprisingly well,
put out about 60 watts and to mysurprise was much more stable that I
expected given a VFO putting out about 7 watts of RF!!!
Had few QSO's with it and then had to dispose of it when I retired and
moved house. I hope my fellow NZ Vintage radio club member is looking
after it! Of course they can be a bit lethal mine had 1Kv ht and apart
from an insulated front panel it was all accessible.
73 Cliff Wright ZL1BDA ex G3NIA

# 1846. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 11:51:02 UTC
From: cliff wright <c.c.wright@paradise.net.nz>
Message-ID: <4922ac1d$1@clear.net.nz>
Source record: 3883

#!/bin/bash wrote:

> KC7PM wrote:
>
>>I saw something in the last year or two about building a PC that runs
>>entirely on 12V and with low power consumption. Does anyone know
>>where I can find that article or website?
>
>
> Oh you can roll your own quite easily. Go to http://www.mini-box.com
> and put together a combination of case, system board, and power supply.
> You'll need to add memory and disk to it, as well. I'm currently using
> an Intel system board (D945GCLF2) which comes with a dual core Atom 330
> processor soldered on. I'm running my on 110VAC but it's quite a
> capable system board and I wouldn't hesitate to try to build a 12VDC
> system around it.
Of course you can roll your own switchmode psu from 12 volts to whatever votage a laptop requires. That would be easiest. I've made a couple from a circuit in the Aussie magazine "Silicon Chip" a year or so back and they have worked well. The output can be varied from 12 volts to about 20 volts at up to 3 amps with no problems. I used mine to run a laptop to drive my telescope in the field from a car battery supply.
Cliff Wright ZL1BDA

# 1847. Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 14:22:19 UTC
From: kendal.goodson@gmail.com
Message-ID: <8a21c62a-4311-4e3b-a0fc-01808006b7df@u29g2000pro.googlegroups.com>
Source record: 3884

Hello all,

Can someone explain to me the mechanism of how a VFO "pulls" during transmit? I have a transmitter circuit I've breadboarded, ugly construction style, and the VFO will pull up ~2kHz with the key down. The transmitter circuit is borrowed almost verbatim from the K1SWL SW40+ transceiver.

I've checked the following:

1. dropped off the driver and final amp circuit with no change in behavior
2. the tuning voltage to the varactor in the tank circuit does not change during keydown.

I know there could be several answers here. What should I be looking for?

Thanks to all,
Kenn
KA5KXW

# 1848. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 16:09:12 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B5A674DDC0672MDWN@194.177.96.78>
Source record: 3886

Howdy,

Geez... I read this and it confused me. I haven't been
sleeping much and shouldn't post late at night.

The easy fix is to use an emitter follower circuit
where the the constant current load is connected to
the emitter. If you put the regulator in the Positive
side lead use an NPN.

In my instance the current regulator's pass transistor
is in the negative lead so the heatsink is at the same
potential as the vehicle chassis. No insulating hardware
is required.

73,
Grumpy

Grumpy The Mule <s_foonly@foo.bar> wrote in
news:Xns9B5A120DDA5BA2MDWN@194.177.96.78:

> There is an easy fix if you use a PNP pass transistor. Clamp
> the base at 13.6V plus a base emitter drop, say 0.8V, the output
> can't rise higher than the float voltage.

# 1849. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 16:21:53 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B5A6973E4A342MDWN@194.177.96.78>
Source record: 3887

Howdy,

If the supply voltage to the oscillator changes, even though the
tuning voltage is stable, it may chirp or pull.

If the change is slow look for thermally induced changes like
You may not be able to feel this change with a finger. Applying
a bit more heat to suspected parts might indicate the culprit.

Also look for changes in the voltage on large capacitors. It
wouldn't be unusual for bias voltages to change when the oscillator
starts up. An extreme case of this is squegging.

73,
Grumpy

# 1850. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 16:22:51 UTC
From: HighlandObserver@gmail.com
Message-ID: <duq5i450pofnqgsre6qgu610gk873rv4lv@4ax.com>
Source record: 3888

On Mon, 17 Nov 2008 09:06:28 -0800 (PST), JIMMIE <jimmie68@gmail.com> wrote:

>I didnt think you could charge a deep cycle battery in an
>automotive system without damaging the battery.

Hmmm mine is 7yrs old

# 1851. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 16:58:09 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6ogahsF3597pU1@mid.individual.net>
Source record: 3889

kendal.goodson@gmail.com wrote:

> Hello all,
>
> Can someone explain to me the mechanism of how a VFO "pulls" during
> transmit? I have a transmitter circuit I've breadboarded, ugly
> construction style, and the VFO will pull up ~2kHz with the key down.
> The transmitter circuit is borrowed almost verbatim from the K1SWL
> SW40+ transceiver.
>
> I've checked the following:
>
> 1. dropped off the driver and final amp circuit with no change in
> behaviour
> 2. the tuning voltage to the varactor in the tank circuit does not
> change during keydown.
>
> I know there could be several answers here. What should I be looking
> for?

There could be many culprits:

Check the supply voltage to the oscillator. Does it change when the key's down? If so, try better supply regulation to the oscillator.

Does anything get warm either in the oscillator or nearby? If so, you've got thermal problems - changing the layout may help, or correcting the thermal drift with temperature-compensating components (I used to use thermistors to change the bias on varicap diodes to do this).

Does the loading on the output of the oscillator change at key down? If so, you need a better buffer stage. I usually use FET buffers for very light loading (high input impedance).

If all else fails, you're going to have to either rebuild the oscillator, or consider some kind of stabiliser. I sometimes use PLL circuits (you can get 1 kHz steps on any band up to 30 MHz with just three cheap 74HC chips) or a fast "huff-and-puff" stabiliser for stable tuning with very small step size - see http://downloads.hanssummers.com/qexnov98.pdf - which is astonishingly stable and very cheap to build.

HTH

Bob

# 1852. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 17:08:47 UTC
From: hmtavella@cybertap.com.ar
Message-ID: <4922e71d@news.x-privat.org>
Source record: 3885

hI:

Try shielding your VFO
Good Luck

Heriberto
LU6DBU
<kendal.goodson@gmail.com> escribi&#65533; en el mensaje
news:8a21c62a-4311-4e3b-a0fc-01808006b7df@u29g2000pro.googlegroups.com...
> Hello all,
>
> Can someone explain to me the mechanism of how a VFO "pulls" during
> transmit? I have a transmitter circuit I've breadboarded, ugly
> construction style, and the VFO will pull up ~2kHz with the key down.
> The transmitter circuit is borrowed almost verbatim from the K1SWL
> SW40+ transceiver.
>
> I've checked the following:
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> 1. dropped off the driver and final amp circuit with no change in
> behavior
> 2. the tuning voltage to the varactor in the tank circuit does not
> change during keydown.
>
> I know there could be several answers here. What should I be looking
> for?
>
> Thanks to all,
> Kenn
> KA5KXW

# 1853. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 17:14:39 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B5A7266041062MDWN@194.177.96.78>
Source record: 3890

Howdy

I didn't describe this fully.

Dissipation protection... Put the diode of an optocoupler
with a resistor in series across the pass device's emitter
and collector. Then connect the opto's transistor to the
reference feeding the base of the pass device. Adjust the
resistor in series with the LED so that when there's too
much voltage across the pass device the led lights and
decreases the reference voltage which reduces the current
in the pass device.

Another way to do this requires a zener, two transistors
and three resistors. Optos are cheap enough and it's
less parts to wire up.

I fused the output in case something breaks, to keep the
circuit from being slagged. In a short the thermal breaker
on the transformer took about 45 seconds to trip. I've no
idea what the fault current was but the needle of the lazy
ten amp full scale meter that's built into the charger was
slammed forcefully against the stop.

73,
Grumpy

Grumpy The Mule <s_foonly@foo.bar> wrote in
news:Xns9B5A120DDA5BA2MDWN@194.177.96.78:

> You'll need some sort of short circuit protection. During a short
> the ten amps times the supply voltage will be dissipated in the pass
> device. Could be a fuse or breaker or active protection. I left
> this out of my first attempt and the pass device didn't like being
> shorted for even a moment. Luckily I tested this before putting it
> all back together rather than finding out later on in a snow storm.
> The existing thermal breaker was much too slow.
>

# 1854. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 17:25:45 UTC
From: Kendal Goodson <kendalg@yahoo.com>
Message-ID: <c6d9a871-5210-4248-a5bc-eb7e2c323a58@w1g2000prk.googlegroups.com>
Source record: 3891

On Nov 18, 10:21 am, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> If the supply voltage to the oscillator changes, even though the
> tuning voltage is stable, it may chirp or pull.
>
> If the change is slow look for thermally induced changes like
> You may not be able to feel this change with a finger. Applying
> a bit more heat to suspected parts might indicate the culprit.
>
> Also look for changes in the voltage on large capacitors. It
> wouldn't be unusual for bias voltages to change when the oscillator
> starts up.  An extreme case of this is squegging.
>
> 73,
> Grumpy

Thanks Grumpy. I'll check supply voltage next. It's not a thermal
problem. The output is nice and stable until key down when it pulls.
It's also frequency stable during keydown, just on a different
frequency. The oscillator isn't keyed, so I don't think it's an
oscillator startup issue.

73,
Kenn

# 1855. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 17:28:20 UTC
From: highlandham <rfburns@nospam.sco>
Message-ID: <Uv2dnWJjtbYj9r7UnZ2dnUVZ8hydnZ2d@pipex.net>
Source record: 3898

JIMMIE wrote:
> On Nov 16, 4:42 pm, HighlandObser...@gmail.com wrote:
>> Why not use a traditional split charge relay.
>> Alternator output then becomes the limiting factor
>
> I didnt think you could charge a deep cycle battery in an
> automotive system without damaging the battery. Its my understanding
> that car batteries are designed for a quick charge at realativly high
> current while deep cycle batteries require a long low current charge.
> To make it work thought you had to have a special charge regulator for
> the deep cycle battery.
==========
'Deep Cycle' batteries should be charged with a current not exceeding
0.1C , meaning that a 80Ah battery should be charged with a current not
exceeding 8 Amperes.

Frank KN6WH

# 1856. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 19:02:56 UTC
From: "pdrahn@coinet.com" <co_farmer@yahoo.com>
Message-ID: <15f8b95e-a2ae-46a0-8a43-5da21face1bf@i18g2000prf.googlegroups.com>
Source record: 3892

Hi, Bill.
Indeed it is a great looking project.

I don't see anyone attempting to answer you question about why the early transmitters always doubled or tripled from stage to stage. As I recall, this was used to minimize the loading on previous stages as a subsequent stage was tuned. The loading caused frequency changes. This was used only on triode tubes. When screen grid stages were used, it was no longer necessary.

Further research would have shown 160 meter crystals were frequently used to control 80 meter transmitters. It wasn't just because the higher frequency crystals were not available. They were just more expensive.

Again, a great looking project. I do see a modern resister in there, however.

73's, Paul, KD7HB

On Nov 11, 8:35 pm, exray <radioex...@geeemail.com> wrote:
> Hi,
> I've gotten far enough along with this project to where I'm ready to
> toss it out for public scrutiny, so have at me, guys.
>
> I'm a receiver guy - never built a tube transmitter from scratch and
> this is my first go.  My goals were, in no particular order, to build
> something with a early 30s breadboard look, xtal control, 40/20 meters
> primarily - 80/30 as bonus, moderate power for getting on the air
> barefoot while not overpowering a future amp idea...and of course using
> accessible parts.
>
> This is sort of my compilation of ideas from old QST articles.  Robbed
> ideas from this and that to make them fit.  I made some major boo-boos
> at first but I think I finally have them sorted out.  Something that
> dawned on me a little bit slowly is that none of those old xmtrs were
> set up to operate 40 meters with a 7 Mc xtal.  Much of the emphasis was
> on double this/double that.  Nowadays we have 7 and 14 Mc fundamental
> xtals abounding so I went the route of reinventing the wheel so to speak.
>
> The rig is working at this stage...at least straight thru on 40.
> Waiting for some other bits and bobs to carry on to other bands.  The
> note sounds good and its nothing I'm reluctant to put on the air.  On
> the other hand its a massive amount of wood and metal for a measly 5 or
> 6 watts :)  A little slatboard 6V6 chirper would have been much easier.
>

> Anyway, I'm not a veteran with old xmtrs so I'm putting it out for
> comments, questions, critiques, etc.  Flame suit is handy!
>
> Schematic:http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/schema111108...
>
> View:http://i132.photobucket.com/albums/q18/billynaty/1stXmtr/Dscf1436.jpg
>
> -Bill WX4A/KP4

# 1857. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 19:16:57 UTC
From: highlandham <rfburns@nospam.sco>
Message-ID: <JP2dnZ5xvJ06ib7UnZ2dnUVZ8qPinZ2d@pipex.net>
Source record: 3893

> Wahl is still selling their battery powered soldering
> iron. I used to own one of those until the nicad's
> went bad. They're in Sterling Ill.
==========
I am using a Wahl battery powered soldering iron since the 1980s
However the battery charger is rather crude ;just a transformer with an
embedded diode.
I have changed the charging circuit by using a 12V transformer
,rectifier and an LM317 and a switch enabling charging at 300 mA (when
soldering iron is in use)and 10 mA (permanently) when iron is not in use.

Frank KN6WH (GM0CSZ temporarily in California)

# 1858. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 19:19:19 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gfv4fp01d8l@news5.newsguy.com>
Source record: 3894

Kendal Goodson wrote:

> Thanks Grumpy. I'll check supply voltage next. It's not a thermal
> problem. The output is nice and stable until key down when it pulls.
> It's also frequency stable during keydown, just on a different
> frequency. The oscillator isn't keyed, so I don't think it's an
> oscillator startup issue.
>
> 73,
> Kenn

I'm missing something. You said that the 'driver' etc were disconnected
and the osc is not being keyed.

So what is actually being keyed?

-Bill

# 1859. Re: Homebrew breadboard xmtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 19:25:07 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gfv4ql01djs@news5.newsguy.com>
Source record: 3895

pdrahn@coinet.com wrote:
> Hi, Bill.
> Indeed it is a great looking project.
>
> I don't see anyone attempting to answer you question about why the
> early transmitters always doubled or tripled from stage to stage. As I
> recall, this was used to minimize the loading on previous stages as a
> subsequent stage was tuned. The loading caused frequency changes. This
> was used only on triode tubes. When screen grid stages were used, it
> was no longer necessary.
>
> Further research would have shown 160 meter crystals were frequently
> used to control 80 meter transmitters. It wasn't just because the
> higher frequency crystals were not available. They were just more
> expensive.
>
> Again, a great looking project. I do see a modern resister in there,
> however.
>
> 73's, Paul, KD7HB

Thanks, Paul. There wasn't really a question there other than the
rhetorical observation that 'straight-thru' operation on 7 Mc and above
wasn't the norm. Thats not always clear to the reader in year 2008!

As for the modern resistor...umm, well, there's more than one in there
at this stage of experimentation :) Will take care of that after
nailing down all of the parameters.

73,
-Bill

# 1860. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 22:21:39 UTC
From: Kendal Goodson <kendalg@yahoo.com>
Message-ID: <94ddf96b-a61d-4e16-b5c2-c4dd1d72e488@v22g2000pro.googlegroups.com>
Source record: 3896

On Nov 18, 1:19 pm, exray <radioex...@geeemail.com> wrote:
> Kendal Goodson wrote:
> > Thanks Grumpy.  I'll check supply voltage next. It's not a thermal
> > problem.  The output is nice and stable until key down when it pulls.
> > It's also frequency stable during keydown, just on a different
> > frequency.  The oscillator isn't keyed, so I don't think it's an
> > oscillator startup issue.
>
> > 73,
> > Kenn
>
> I'm missing something.  You said that the 'driver' etc were disconnected
> and the osc is not being keyed.
>
> So what is actually being keyed?
>
> -Bill

I see I've done a poor job of writing up the problem statement. The
VFO at ~3.050 feeds a SA612 whose internal oscillator runs at 4.0 Mhz
and mixes the two to come up with ~7.050Mhz. Output from the mixer
goes through a tuned bandpass filter to a class A driver and then to a
class C final. When I found I had a problem with the VFO staying on
frequency during transmit, I disconnected the driver stage and
replaced it with a resistor termination. The problem stayed
consistent. The SA612 and the buffer/driver stage are both keyed.

-Kenn

# 1861. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-18 22:44:43 UTC
From: gwhite@alum.mit.edu
Message-ID: <xzHUk.263558$4p1.157377@en-nntp-09.dc1.easynews.com>
Source record: 3897

In article <8a21c62a-4311-4e3b-a0fc-01808006b7df@u29g2000pro.googlegroups.com>,
kendal.goodson@gmail.com wrote:
>Hello all,
>
>Can someone explain to me the mechanism of how a VFO "pulls" during
>transmit? I have a transmitter circuit I've breadboarded, ugly
>construction style, and the VFO will pull up ~2kHz with the key down.
>The transmitter circuit is borrowed almost verbatim from the K1SWL
>SW40+ transceiver.
>
>I've checked the following:
>
>1. dropped off the driver and final amp circuit with no change in
>behavior
>2. the tuning voltage to the varactor in the tank circuit does not
>change during keydown.
>
>I know there could be several answers here. What should I be looking
>for?

It could also be a loading/buffering issue. If the load the VFO sees
changes when you key on the rest of the system, that will also cause
pulling. You need lots of isolation between the two pieces. A gain
stage with good front-to-back isolation followed by an attenuator will
provide plenty.

Doug White

# 1862. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 01:32:46 UTC
From: Kendal Goodson <kendalg@yahoo.com>
Message-ID: <5fdaac42-62b7-4789-b9f4-65f4899e0f50@k24g2000pri.googlegroups.com>
Source record: 3899

On Nov 18, 4:44 pm, gwh...@alum.mit.edu (Doug White) wrote:
> In article <8a21c62a-4311-4e3b-a0fc-01808006b...@u29g2000pro.googlegroups.com>,
kendal.good...@gmail.com wrote:
>
>
>
> >Hello all,
>
> >Can someone explain to me the mechanism of how a VFO "pulls" during
> >transmit? I have a transmitter circuit I've breadboarded, ugly
> >construction style, and the VFO will pull up ~2kHz with the key down.
> >The transmitter circuit is borrowed almost verbatim from the K1SWL
> >SW40+ transceiver.
>
> >I've checked the following:
>
> >1. dropped off the driver and final amp circuit with no change in
> >behavior
> >2. the tuning voltage to the varactor in the tank circuit does not
> >change during keydown.
>
> >I know there could be several answers here. What should I be looking
> >for?
>
> It could also be a loading/buffering issue. If the load the VFO sees
> changes when you key on the rest of the system, that will also cause
> pulling. You need lots of isolation between the two pieces. A gain
> stage with good front-to-back isolation followed by an attenuator will
> provide plenty.
>
> Doug White
I've located the problem. I thought it would be something pretty
subtle and it turned out to be just that. One of the pins on the
SA612 did not go into the socket properly. It bent under and was just
almost touching the socket contact. I guess it was capacitively
coupling to the VFO output instead of getting a good feed. I've
straightened it and I'm up and running.

Thanks for all of the suggestions.

72,
Kenn
KA5KXW

# 1863. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 01:33:16 UTC
From: Kendal Goodson <kendalg@yahoo.com>
Message-ID: <5c53c4a1-f124-45e4-a0be-de141477da95@a29g2000pra.googlegroups.com>
Source record: 3900

On Nov 18, 4:44 pm, gwh...@alum.mit.edu (Doug White) wrote:
> In article <8a21c62a-4311-4e3b-a0fc-01808006b...@u29g2000pro.googlegroups.com>,
kendal.good...@gmail.com wrote:
>
>
>
> >Hello all,
>
> >Can someone explain to me the mechanism of how a VFO "pulls" during
> >transmit? I have a transmitter circuit I've breadboarded, ugly
> >construction style, and the VFO will pull up ~2kHz with the key down.
> >The transmitter circuit is borrowed almost verbatim from the K1SWL
> >SW40+ transceiver.
>
> >I've checked the following:
>
> >1. dropped off the driver and final amp circuit with no change in
> >behavior
> >2. the tuning voltage to the varactor in the tank circuit does not
> >change during keydown.
>
> >I know there could be several answers here. What should I be looking
> >for?
>
> It could also be a loading/buffering issue. If the load the VFO sees
> changes when you key on the rest of the system, that will also cause
> pulling. You need lots of isolation between the two pieces. A gain
> stage with good front-to-back isolation followed by an attenuator will
> provide plenty.
>
> Doug White
I've located the problem. I thought it would be something pretty
subtle and it turned out to be just that. One of the pins on the
SA612 did not go into the socket properly. It bent under and was just
almost touching the socket contact. I guess it was capacitively
coupling to the VFO output instead of getting a good feed. I've
straightened it and I'm up and running.

Thanks for all of the suggestions.

72,
Kenn
KA5KXW

# 1864. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 02:25:11 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gfvte901ocv@news3.newsguy.com>
Source record: 4001

Kendal Goodson wrote:

> I've located the problem. I thought it would be something pretty
> subtle and it turned out to be just that. One of the pins on the
> SA612 did not go into the socket properly. It bent under and was just
> almost touching the socket contact. I guess it was capacitively
> coupling to the VFO output instead of getting a good feed. I've
> straightened it and I'm up and running.
>
> Thanks for all of the suggestions.
>
> 72,
> Kenn
> KA5KXW

Ah, good detective work. I would have never seen that coming!

-Bill

# 1865. Re: Auton viritt&#65533;minen

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 03:38:37 UTC
From: Ismo Bergman <bergman@snider.net>
Message-ID: <gg01np$kv9$1@ork-un.noris.net>
Source record: 4002

Ilmastointimysteerio.

Nyt kuin olin p&#65533;&#65533;ssyt j&#65533;ljille siit&#65533; mekanismista joka k&#65533;tket&#65533;&#65533;n ydinvoimalan systeemeihin n&#65533;k&#65533;j&#65533;&#65533;n aivan kylm&#65533;sti, aloin pohtimaan mieless&#65533;ni useita kummallisilta tuntuneita tapauksia ydinvoimalan starttaamisten alkuajoilta. ASEA:n ty&#65533;l&#65533;isilt&#65533; olin saanut kuulla er&#65533;&#65533;n varsin kummallisen v&#65533;itt&#65533;m&#65533;n ja turvaohjeen. Henkil&#65533; oli sit&#65533; mielt&#65533;, ett&#65533; viimeist&#65533;&#65533;n noin vuosi ydinvoimalan k&#65533;ynnistymisest&#65533; eteenp&#65533;in olisi syyt&#65533; oman turvallisuutensa vuoksi vaihtaa muihin elossa pit&#65533;vimpiin hommiin. Kysytt&#65533;ess&#65533; syyt&#65533; moiseen, h&#65533;n v&#65533;ltellen lis&#65533;keskusteluja oli vain kuitannut, ett&#65533; olisi syyt&#65533; seurata alkuaineiden kulkeutumista ydinvoimalan poistoilman piipun ns. "pyyhk&#65533;isytuloksissa"? Kyseiselt&#65533; oli tivattaessa irronnut senverran lis&#65533;tietoa, ett&#65533; nimenomaan kromista on puhe. My&#65533;hemmin olen sitten selvitellyt taustoja my&#65533;s t&#65533;st&#65533; tarkemmin. Sanotaan t&#65533;h&#65533;n aluksi tukitietona, kromi kuuluu siihen erityisen haitalliseen alkuaineryhm&#65533;&#65533;n, jota pitk&#65533;aikainen s&#65533;teily eroosioi voimalaitoksen rakenteista. Kromin kemikalisaatiomyrkkyin&#65533; tunnettu on mm. pel&#65533;tty 6-arvoinen kromi. Joka on vaarallinen mm. kyvyst&#65533;&#65533;n aiheuttaa sy&#65533;p&#65533;&#65533;. Ja sen kulkeutumismekanismi nimenomaan ilmastointiin on l&#65533;hinn&#65533; tieto siit&#65533;, kuinka pitk&#65533;ll&#65533; voimalaitoksen "yleiss&#65533;teilytausta" on kyennyt jo vakiintumaan.

Normaalilla ty&#65533;l&#65533;isell&#65533; ei toki ole edes teoreettista mahdollisuutta saada moista selville, mutta TVO:n laboratoriossa kyll&#65533; n&#65533;it&#65533; salaisia pyyhk&#65533;isykokeita alusta asti kyll&#65533; tehtiin. En halua sen tarkemmin kertoa t&#65533;h&#65533;n henkil&#65533;iden nimi&#65533;, mutta kun t&#65533;m&#65533; etenev&#65533; kriittinen kromil&#65533;yt&#65533; aikanaan sitten mitattiin, l&#65533;hti saman tien ydinvoimalasta tilanteen tiet&#65533;neet ja siit&#65533; selvill&#65533; olevat harvat. Kuvaavaa t&#65533;ss&#65533; vaiheessa oli, ett&#65533; henkil&#65533;, joka joutui t&#65533;h&#65533;n savupiippuun hakeutumaan joutui k&#65533;ytt&#65533;m&#65533;&#65533;n rajua suojavarustusta tiedon kromiatomeista tultua julki. Moninkertaista suojahaalaria ja hengityssuojaimia ja vastaavia oli siit&#65533; p&#65533;iv&#65533;st&#65533; asti pakko k&#65533;ytt&#65533;&#65533;. Joten oli mit&#65533; ilmeisint&#65533;, t&#65533;m&#65533; kromin mystinen kulkeutuminen, juuri kuten ennakoitiin ei ollut mik&#65533;&#65533;n jonninjoutava heitto. Vaan ydinvoimaloissa oli her&#65533;nnyt henkiin jotain salattua ja kuoletettavaa keskuuteemme. Siit&#65533; p&#65533;iv&#65533;st&#65533; l&#65533;htien ei juuri ollut halukkaita t&#65533;h&#65533;n jokavuotiseen perushuoltokeikkaan vaihtamaan piipun ns. lentovaloja. Jollain tasolla kaikki vaan tiedosti kyseess&#65533; ei ollut mik&#65533;&#65533;n harhakuva vaarasta. Mutta mik&#65533; viel&#65533; t&#65533;ss&#65533; vaiheessa h&#65533;mm&#65533;stytti, oli mist&#65533; mekanismista moinen voisi johtua?

Ehk&#65533; t&#65533;h&#65533;n on sopivaa kertoa vastaavantyyppinen sen aikuinen episodi my&#65533;s laitoksen nimenomaan ilmastointiin liittyv&#65533;&#65533;n tapaukseen. On todella kummeksuttava havaita ett&#65533; juuri ilmastointi on niin keskeinen tekij&#65533;. Sill&#65533; on koko laitosalueella musertava perusominaisuus. Kun liikkuu ydinvoimaloiden sis&#65533;rakennuksissa ja erityisesti tietyiss&#65533; huoneissa huomaa

��rimm�isen meluisan ja vastenmielisen, suorastaan py�rremyrskym�isen ilmanvaihdon k�yt�nn�ss� kaikkialla. Ihmetelt�vint� on siin�, ett� tuuletusta ei moisissa mitoissa mill��nlailla l�mp�- saati hapetussyist� niin massiivisena tarvita. Ihmisi� teknisiss� tiloissa ei ole kuin satunnaisesti. Samoin j��hdytett�v�n ei usein ole kuin satunnaista tekniikkaa, mutta aina l�sn�oleva hatun p��st� repiv� ylett�m�n suuri ja meluisa ilmastointi. Niin siit� ei p��se juuri miss��n laitoksen 1500 huoneissa eroon. Sitten sen seuralaisena on er�s viel� oudompi tekij�. Kun menee laitoksen sis�osiin aamuvirkkuna, ei siell� tarvitse olla kuin reilun tunnin, niin raukeus iskee. En siis tarkoita mit��n normaalia kyll�stymist�, vaan totaalista energian katoa elimist�st�. Olen joutunut sen kymmenet kerrat raahaamaan melkein jalattomaksi k�yneit� raavaita ja hyv�kuntoisia alle 20v kes�harjoittelijoita n�ist� huoneistoista. On liki mahdotonta ymm�rt�� sit�, miten virke� elimist� voi silmiss� rojahtaa jo reilun tunnin sis�ll� niin veltoksi, ettei ty�kaveri saa juuri sanaa suustaan.

Olen t�t� useasti tuuminut ja kysellyt aiheesta my�s laitoksen ylemmilt�. Vastaus on mit��nkertomaton ja yleens� vedotaan tiloissa pidett�v�n "turvallisuussyist�" alipainefaasia ja muut l�pin�kyv��. No sanomatta on selv��, ett� halusimme alkuaikoina saada puhaltimia pitemm�n ty�n tehdess�mme seisokkihuolloissa pois. Vaan aina tylysti sanottiin, ettei mill��n k�y. Koskaan muuta ei selitelty. Kun kysyi ulko-ovien aukipit�mist� hapen saamiseksi, sama kiertelev� vastaus. Kun ei k�ynyt , niin ei k�ynyt. Ihmettely omassa mieless� vain kasvoi. Kyll� t�h�n nyt liittyi jotain aivan ymm�rryksen ylitt�v�� ja ennen kaikkea ��rimm�isen tarkoin salattua. Jotain sellaista, joka tietona on elint�rke�� saada selvitetty� itselleen. Jokin asiassa m�tti ja pahasti!

Viel� er�s varsin keskeinen muistelus. My�s laitoksen ilmastointiin kytkeytyv�. Olin laitoksella tekem�ss� rutiininomaisia vuosihuoltoja. T�ll� kertaa teht�v�kenttiini kuului k�yd� l�pi ty�kavereineni puhaltimien kunnossapitotarkastuksia ja muita perushuoltoja laitosrutiinihuoltoina. Ei siin� mit��n olihan laitteistot tuttuja ja kiva saada my�s uusia kokemuksia ja vaihtelua puuduttaviin perusrutiineihin. Puhallinkoneistot ovat luonteeltaan massiivisia miehenkorkuisia monimetrisi� s�hk�moottorik�ytt�isi� meluisia yksik�it�. Niit� huollettiin miehenment�vist� peltiluukuista. Rutinoituneesti siis aamulla kyselin ja selvittelin mist� ja milloin saisin katkaista aina kyseisen ilmanvaihtokoneen k�ytt�s�hk�t menness�mme koneiden sis��n. Silloin sain kuulla lauseen jota en koskaan unohda. Aina, ihan aina oli painotettu, ett� ehdottomasti joka tilanteessa kun laitteita huolletaan on kaikki s�hk�t katkaistava. T�t� p�iv�� ennen turva-ajattelu oli t�ss� t�ysin ehdoton. S�hk�t katkotaan ennen huoltoa pois. Nyt kuin salama kirkkaalta taivaalta oli tullut laitosp��llik�ilt� ehdoton vaatimus. Koneet huolletaan e h d o t t o m a s t i k�yvin�!

Siin� vaiheessa luonnollisesti kielt�ydyin moisesta hengenvaaraan asettumisesta, niin itseni, kuin ty�kaverieni osalta. Koska en t�ss� vaiheessa saanut selke�� vastausta h�milleen menneelt� ty�njohtajaltani edes tivattaessa, sanoin soittavani aina valvomoon sammuttaessani kyseisen

puhallinkoneiston. Saavuimme ty&#65533;paikalle ja soitin, juuri kuten olin ilmoittanut aina katkaistessani kyseisen laitteiston. Hetken aikaa kaikki meni rutiinisti ja hommat tulivat tehty&#65533;. Mutta siin&#65533; vaiheessa, kun aloimme k&#65533;yd&#65533; l&#65533;pi nimenomaan valvomon puhallinlaitteistoja alkoi kuulutuksesta kaikua vaatimus ilmoittaa toistamiseen tehdyst&#65533; irtikytkenn&#65533;st&#65533; varsin k&#65533;skev&#65533;sti. Ilmoitettuani toimenpiteen koordinaatistot ja syyn siihen vaadittiin ilmastointikojeistojen v&#65533;lit&#65533;nt&#65533; takaisinkytkemist&#65533;. Kummastelin jo t&#65533;ss&#65533; vaiheessa miten on mahdollista, ett&#65533; useiden rinnakkain samaan ilmastointikanavaan puhaltavien flektien yksitt&#65533;ispys&#65533;ytys ei muka olisi mahdollista? Nimitt&#65533;in aina oli my&#65533;s TVO:n kursseissa korostettu miten jo yksi ainokainen rinnakkaislaite takaisi jopa kriisin sattuessa turvallisen prosessin etenemisen. Aina juuri t&#65533;h&#65533;n asti oli korostettu, ettei yhden, kahden, tai per&#65533;ti kolmen rinnakkaislaitteen poistumisella k&#65533;yt&#65533;st&#65533; olisi mit&#65533;&#65533;n vaaraa turvallisuuden kannalta. Saati muun prosessinhallinnan vaikeutumisen osalta. Ja nyt yht&#65533;kki&#65533; sanottiin jo yhden koneiston hetkellisen huoltoseisokki aiheuttaa turvavaaran! Olin &#65533;llik&#65533;ll&#65533;, huomasin my&#65533;s viimeist&#65533;&#65533;n t&#65533;ss&#65533; vaiheessa miten totuus ja koulutusmateriaali oli irti toisistaan. Tottakai j&#65533;timme huoltoseisokkikierroksemme tekem&#65533;tt&#65533; ja palasimme perin kummalisin tunnoin majapaikkaamme. Eteemme oli kuin v&#65533;l&#65533;yksenuomaisesti kohonnut jotain ennenn&#65533;kem&#65533;tt&#65533;m&#65533;n uhkaavaa ydinalaan liittyv&#65533;&#65533;.

Kyselin vaisulta ty&#65533;njohtajalta asiaan liittyvi&#65533; taustoja ja per&#65533;ti merkillisi&#65533; juonik&#65533;&#65533;nteit&#65533;. Mit&#65533;&#65533;n selke&#65533;&#65533; raportointia en itse asiassa koskaan saanut. Tiedustelin ponnekkaasti my&#65533;s sit&#65533; miten edes teoriassa voidaan vaatia henkil&#65533;kunnan suorittavan moisen kamikazehuollon. Eik&#65533; edes ty&#65533;turvavaltuutetulla, tai p&#65533;&#65533;luottamusmiehell&#65533; ollut mit&#65533;&#65533;n sanottavaa? Ainoa vaikutus tilanteelle oli kun sain siirron sellaiselle ty&#65533;paikalle jossa en joutunut vastaavaan rupeamaan. My&#65533;hemmin kyselin miten ylip&#65533;&#65533;t&#65533;&#65533;n kukaan voi huoltaa hengenvaarallisesti ilmastointilaitteet, niin vastattiin vaan yliolkaisesti ettei ole minun murheeni. Sen verran sain j&#65533;lkik&#65533;teen kuulla, ett&#65533; koneet siit&#65533; lukien tosiaan huollettiin henke&#65533; pid&#65533;tellen ja k&#65533;yvin&#65533;! Uteliaisuuteni her&#65533;si ja p&#65533;&#65533;tin selvitt&#65533;&#65533; mist&#65533; moinen hysteria ja suunnaton pelko ilmastoinnin kohdalla perimm&#65533;lt&#65533;&#65533;n kertoi. Sain, kuin sainkin selvyyden laitostoimittaja ASEA:n osaajilta, ett&#65533; kyseess&#65533; oli varsin tarkoin varjellun ydinlaitossalaisuuden tietoinen pimitt&#65533;minen henkil&#65533;kunnalta. Jos tieto vuotaisi julkisuuteen, sen esitt&#65533;j&#65533;&#65533; kohtaisi irtisanomiset ja vastaavat sanktiot! Mist&#65533; oli perimm&#65533;lt&#65533;&#65533;n kyse? Ydinvoimaloiden ilmastointiin liittyy mekanismi, joka vaatii tauotonta ilmanvaihtoa kaikissa niiss&#65533; tiloissa, joissa edes v&#65533;h&#65533;n on s&#65533;teilyenergiaa. Eli turbiinisalit ja reaktorihallit, asiassa kaikki "tekniset tilat" henkil&#65533;st&#65533;konttoritiloja ja valvomoa lukuun ottamatta pit&#65533;&#65533; olla tauottoman ilmahuuhtelun piiriss&#65533;. Sain kuulla miten pahimmillaan jo noin 15 min ilmastointikatkos saattaa kyseiset tilat radioaktiivisiksi ja niin kova s&#65533;teily niiss&#65533; silloin jo on, ett&#65533; syntyy hengenvaaraa. Jos esimerkiksi n&#65533;ist&#65533; teknisist&#65533; tiloista ilma virtaa v&#65533;&#65533;rinp&#65533;in valvomoon, niin henkil&#65533;st&#65533; on v&#65533;litt&#65533;m&#65533;ss&#65533; kuolemanvaarassa!

En mill&#65533;&#65533;n saattanut ymm&#65533;rt&#65533;&#65533; mekanismia, jossa ei s&#65533;teilydosimetri edes n&#65533;ytt&#65533; mit&#65533;&#65533;n muuttaa noin nopeasti ilman niin vaaralliseksi, ett&#65533;

hengenl�ht� konkreettisesti on mahdollista. T�m� oli joko t�rke� vale, tai sitten joku ei ymm�rt�nyt, mit� puhui. Mutta koska tilanteessa sain ty�paikanvaihdoksen selityksitt� osakseni ja kun huomioin laitosp��llik�n ylireagoinnin huomasin osuneeni johonkin t�ysin siihenastisen ydink�sityskyvyn ylitt�neeseen totuuden sis�lt�v��n miinakentt��n. Siit� p�iv�st� asti olen suoraan sitoutunut selvitt�m��n t�t�, ehk� koko nykyfysiikan tarkemmin varjeltua salausvyyhti�. T�ytyy sanoa jos olisin alusta asti tiet�nyt sen kaikki seurannaiset ja juonenk��nteet, niin ehken olisi koskaan ryhtynyt selvitysty�h�n. Ty�h�n, jonka seurauksena t�m� edess� oleva ��rimm�isen salatun ydinsalaisuuden Bandoran lippaan aukaisu sitten vaikeuksien j�lkeen onnistui! On suorastaan uskomatonta, miten juuri t�st� tapauksesta sai alkuunsa se mekanismi, joka toi p�iv�nvaloon v�hitt��n 60v ajan ��rimm�isen tarkoin varjellun salaisuuden. Jonka varjelemiseksi on perustettu mm. IAEA:n kaltaisia ydintiedon levityksen est�vi� maailmankattavia organisaatioita, mutta eip�s t�ss� vaiheessa paljasteta enemp��. Seuratkaamme eteenp�in, miten kaikki mysteerist� porras kerrallaan alkoi raottua. Haluan lis�t� t�h�n, sain my�hemmin kuulla, ett� minut nimenomaan haluttiin t�h�n ratkomaan jo pitk��n hiert�nytt� ty�turvallisuusdilemmaa. Ja sain kuulla, miten varsin selke�sti p��navaukseni j�lkeen koko ilmanvaihtoflektien huoltorutiini muutettiin sellaiseksi, ett� laitteita alettiinkin vain kuulustelemaan laakerien kunnon varmistukseksi. Vain pys�htyneet laitekokonaisuudet tehd��n virrattomaksi korjaamisensa ajaksi. Eli olin tehnyt teht�v�ni ja sain kontolleni entist� vaativampia ty�vastuukentti�.

# 1866. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 13:23:05 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <a3e7a9b2-5f0f-40b2-a2d2-1bd410b26f2c@v39g2000pro.googlegroups.com>
Source record: 4003

The UC3906 is temp compensated unlike zeners which go up with temp
rise and down with temp decrease. Believe me 1/10 of a volt change
will fawk up the charge rate. Been there done that.

I've quick charged deep cycle marine batteries at work when I forgot
to put my battery on charge on my electric bike. 55 amp in one hour no
problem. Now I was using this my electric bike every day to gits to
work. I got 2 years out of that deep cycle marine battery before my
brushes on my motor were no longer available from Grainger. I didn't
count the times I quick charged the battery at 55 amp rate but it was
quite a few.

If this isn't any everyday thing make it simple, no frilles But a
automotive in car charging system is the worst thing anybody to do to
a battery. I'd let my battery sit on cold concrete before I'd charge
it with an automotive charging system in a car.

73 OM

n8zu

> > I didnt think you could charge a deep cycle battery in an
> > automotive system without damaging the battery. Its my understanding
> > that car batteries are designed for a quick charge at realativly high
> > current while deep cycle batteries require a long low current charge.
> > To make it work thought you had to have a special charge regulator for
> > the deep cycle battery.
>
> ==========
> 'Deep Cycle' batteries should be charged with a current not exceeding
> 0.1C ,  meaning that a 80Ah battery should be charged with a current not
> exceeding 8 Amperes.
>
> Frank   KN6WH

# 1867. Re: Wanted: one of those hat guys

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 14:55:03 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrngi8a67.2ss4.bit-bucket@shell.config.com>
Source record: 4004
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

On Fri, 14 Nov 2008 16:02:18 +0000 (UTC), David Lesher wrote:
>
> The ones that go to hamfests and custom embroider a name/logo onto a hat.
>
> There being no hamfests in the DC region for many months, and me having
> never asked their names/locations..... I thought this might be a place
> to ask.

HUH!?!? They don't have Google where you live?

# 1868. Over 80,000 images of beautiful busty women

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 14:58:44 UTC
From: tyreemand@gmail.com
Message-ID: <844e62be-851a-43f6-b746-4a5eb7f7f386@i18g2000prf.googlegroups.com>
Source record: 4005
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://dunny.withsex.com/ Home of the worlds most downloaded woman,
Danni Ashe. Over 80,000 images of beautiful busty women, nude images,
centerfolds, and porn stars. Original video features, live video
feeds, daily updates.

# 1869. Re: Wanted: one of those hat guys

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 15:38:25 UTC
From: Scott <acepilotREMOVE@bloomer.net>
Message-ID: <TaWdndXOmOVsr7nUnZ2dnUVZ_j2dnZ2d@bright.net>
Source record: 4006
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

Allodoxaphobia wrote:
> On Fri, 14 Nov 2008 16:02:18 +0000 (UTC), David Lesher wrote:
>
>>The ones that go to hamfests and custom embroider a name/logo onto a hat.
>>
>>There being no hamfests in the DC region for many months, and me having
>>never asked their names/locations..... I thought this might be a place
>>to ask.
>
>
> HUH!?!? They don't have Google where you live?

HUH!?!? Google makes hats too??? ;)

# 1870. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 18:04:32 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <3a55ebf2-9fef-4c37-8c8c-df642d1c245a@u29g2000pro.googlegroups.com>
Source record: 4007

On Nov 18, 5:21 pm, Kendal Goodson <kend...@yahoo.com> wrote:
> On Nov 18, 1:19 pm, exray <radioex...@geeemail.com> wrote:
>
>
>
>
>
> > Kendal Goodson wrote:
> > > Thanks Grumpy.  I'll check supply voltage next. It's not a thermal
> > > problem.  The output is nice and stable until key down when it pulls.
> > > It's also frequency stable during keydown, just on a different
> > > frequency.  The oscillator isn't keyed, so I don't think it's an
> > > oscillator startup issue.
>
> > > 73,
> > > Kenn
>
> > I'm missing something.  You said that the 'driver' etc were disconnected
> > and the osc is not being keyed.
>
> > So what is actually being keyed?
>
> > -Bill
>
> I see I've done a poor job of writing up the problem statement.  The
> VFO at ~3.050 feeds a SA612 whose internal oscillator runs at 4.0 Mhz
> and mixes the two to come up with ~7.050Mhz.  Output from the mixer
> goes through a tuned bandpass filter to a class A driver and then to a
> class C final.  When I found I had a problem with the VFO staying on
> frequency during transmit, I disconnected the driver stage and
> replaced it with a resistor termination.  The problem stayed
> consistent.  The SA612 and the buffer/driver stage are both keyed.

Ahah! The SA612's input impedance will change by a lot when it is
keyed up vs keyed down.

Two ways to get around this:

1. Additional buffering between the VFO and SA612

2. Swamp the impedance change from power up to power down by adding
some parallel resistance. Should be DC-isolated from the SA612's input
because otherwise you will upset the balance.

Solution #1 requires some additional parts and current drain. I really
like the two-transistor W7EL buffer.

Solution #2 is just a capacitor and a resistor, but also assumes that the VFO has enough drive that it won't object to being swamped.

Tim N3QE

# 1871. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 18:09:15 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B5B7BA7B4F9F2MDWN@194.177.96.78>
Source record: 4008

Howdy,

There are a of couple newer devices that you might like
even more than the UC3906. Check out the UC3909
and BQ2031.

All zeners are not created equal! The 1N825 is a common
temperature compensated diode and it's uncommonly good.
Transfer standards built in the 1960's and 70's often
used zeners... and they were good enough by golly. The
venerated Fluke 335D used an ion implanted or burried
zener diode and it's still one of the most stable units
available.

Here's the deal, the battery voltage varies with temperature.
About minus 3 to minus 5 milivolts per degree C. Not very
stable! (However for temperatures between 5C to 35C it can be
safely ignored.)

Now if the circuit is exposed to the same ambient temperature
as the battery and your reference drifts about the same amount
and in the same direction as the battery, it can be only a good
thing.

A true zener has a negative temperature coefficient.
An avalanche diode has a positive temperature coefficient.
The cross over point between the two effects is around 5.6V
A common silicon rectifier diode has a negative 2 milivolts
per degree C coefficient.

It's not difficult to select a couple of parts that when
combined in series will produce the minus 5 milivolts per
degree C desired. A 6.8V zener in series with three 1N4001
running 1 milliamp of bias current is in the ball park.

Honest to god temperature compensated charging requires a
temperature sensor in the battery (thermistor usually)
but it's only needed where you're charging at a rate that
heats the battery or when charging over a very wide range
of ambient.

The above is just my opinion and all that jazz...

73,
Grumpy

# 1872. Re: Auton viritt&#65533;minen

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-19 20:10:57 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <jp_Uk.26$jd3.20@newsfe21.iad>
Source record: 4009
Cross-posted to:
sfnet.harrastus.audio+video.autohifi,sfnet.harrastus.itsepuolustus,sfnet.keskustelu.psykologia,rec.radio.amateur.homebrew

"Ismo Bergman" <bergman@snider.net> wrote in message
news:gg01np$kv9$1@ork-un.noris.net...
> Ilmastointimysteerio.
>
> Nyt kuin olin p&#65533;&#65533;ssyt j&#65533;ljille siit&#65533; mekanismista joka k&#65533;tket&#65533;&#65533;n
> ydinvoimalan systeemeihin n&#65533;k&#65533;j&#65533;&#65533;n aivan kylm&#65533;sti, aloin pohtimaan
> mieless&#65533;ni useita kummallisilta tuntuneita tapauksia ydinvoimalan
> starttaamisten alkuajoilta. ASEA:n ty&#65533;l&#65533;isilt&#65533; olin saanut kuulla er&#65533;&#65533;n
> varsin kummallisen v&#65533;itt&#65533;m&#65533;n ja turvaohjeen. Henkil&#65533; oli sit&#65533; mielt&#65533;, ett&#65533;
> viimeist&#65533;&#65533;n noin vuosi ydinvoimalan k&#65533;ynnistymisest&#65533; eteenp&#65533;in olisi syyt&#65533;
> oman turvallisuutensa vuoksi vaihtaa muihin elossa pit&#65533;vimpiin hommiin.
> Kysytt&#65533;ess&#65533; syyt&#65533; moiseen, h&#65533;n v&#65533;ltellen lis&#65533;keskusteluja oli vain
> kuitannut, ett&#65533; olisi syyt&#65533; seurata alkuaineiden kulkeutumista
> ydinvoimalan
> poistoilman piipun ns. "pyyhk&#65533;isytuloksissa"? Kyseiselt&#65533; oli tivattaessa
> irronnut senverran lis&#65533;tietoa, ett&#65533; nimenomaan kromista on puhe. My&#65533;hemmin
> olen sitten selvitellyt taustoja my&#65533;s t&#65533;st&#65533; tarkemmin. Sanotaan t&#65533;h&#65533;n
> aluksi
> tukitietona, kromi kuuluu siihen erityisen haitalliseen alkuaineryhm&#65533;&#65533;n,
> jota pitk&#65533;aikainen s&#65533;teily eroosioi voimalaitoksen rakenteista. Kromin
> kemikalisaatiomyrkkyin&#65533; tunnettu on mm. pel&#65533;tty 6-arvoinen kromi. Joka on
> vaarallinen mm. kyvyst&#65533;&#65533;n aiheuttaa sy&#65533;p&#65533;&#65533;. Ja sen kulkeutumismekanismi
> nimenomaan ilmastointiin on l&#65533;hinn&#65533; tieto siit&#65533;, kuinka pitk&#65533;ll&#65533;
> voimalaitoksen "yleiss&#65533;teilytausta" on kyennyt jo vakiintumaan.

This Finnish message belongs in Newsgroups about nuclear power, not in an amateur radio Newsgroup about home construction of radio equipment.

T&#65533;m&#65533; Suomen viesti kuuluu Uutisryhm&#65533;t noin ydinvoimaa, ei amat&#65533;&#65533;ri radio
Newsgroup noin kodin rakentamiseen radio.

# 1873. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 01:18:46 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <8d078c7b-ddeb-43d6-afe3-cdc3f5c9cd24@e12g2000yqm.googlegroups.com>
Source record: 4010

On Nov 18, 5:21 pm, Kendal Goodson <kend...@yahoo.com> wrote:
> On Nov 18, 1:19 pm, exray <radioex...@geeemail.com> wrote:
>
>
>
>
>
> > Kendal Goodson wrote:
> > > Thanks Grumpy.  I'll check supply voltage next. It's not a thermal
> > > problem.  The output is nice and stable until key down when it pulls.
> > > It's also frequency stable during keydown, just on a different
> > > frequency.  The oscillator isn't keyed, so I don't think it's an
> > > oscillator startup issue.
>
> > > 73,
> > > Kenn
>
> > I'm missing something.  You said that the 'driver' etc were disconnected
> > and the osc is not being keyed.
>
> > So what is actually being keyed?
>
> > -Bill
>
> I see I've done a poor job of writing up the problem statement.  The
> VFO at ~3.050 feeds a SA612 whose internal oscillator runs at 4.0 Mhz
> and mixes the two to come up with ~7.050Mhz.  Output from the mixer
> goes through a tuned bandpass filter to a class A driver and then to a
> class C final.  When I found I had a problem with the VFO staying on
> frequency during transmit, I disconnected the driver stage and
> replaced it with a resistor termination.  The problem stayed
> consistent.  The SA612 and the buffer/driver stage are both keyed.
>
> -Kenn- Hide quoted text -
>
> - Show quoted text -

Are you sure its the VFO and not the SA612?

Jimmie

# 1874. FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 03:40:50 UTC
From: K <K@spam.net>
Message-ID: <4924dc4b$0$4892$9a6e19ea@unlimited.newshosting.com>
Source record: 4011
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FA: An excellent R-390A built by ECA

http://tinyurl.com/6ydbsg

# 1875. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 06:49:27 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <gg319p$mj6$1@news.albasani.net>
Source record: 4012
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

K wrote:
> FA: An excellent R-390A built by ECA
>
> http://tinyurl.com/6ydbsg

Wow, that brings back memories. That is a receiver which came into
being right around when I did (1950's).

The tubes in it alone worth something (can be hard to get replacements
these days, just price them!)

I sat before one of those for untold hours in my younger days ... shame
SW is so empty these days ... :-( It was an EXCELLENT RECEIVER ...

Regards,
JS

# 1876. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 13:46:03 UTC
From: Dave <dave@dave.dave>
Message-ID: <49256a1b$0$31210$bd467cd0@news.dslextreme.com>
Source record: 4013
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

K wrote:
> FA: An excellent R-390A built by ECA
>
> http://tinyurl.com/6ydbsg
>
>
>
What's the green thing by the headphone jack?

## 1877. teen home made p0rn

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 13:59:19 UTC
From: tyreemand@gmail.com
Message-ID: <601adf02-8c98-4973-a9a2-c9f113aeae81@g38g2000yqn.googlegroups.com>
Source record: 4014
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://sambuko.freetzi.com/old.htm homemade lesbian p0rn,homemade p0rn
pics

# 1878. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 14:27:44 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <18c16b47-21b1-4abd-9239-7247964aaed7@u14g2000yqg.googlegroups.com>
Source record: 4015
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

On Nov 20, 8:46 am, Dave <d...@dave.dave> wrote:
> K wrote:
> > FA: An excellent R-390A built by ECA
>
> >http://tinyurl.com/6ydbsg
>
> What's the green thing by the headphone jack?

A very common modification, especially by the Navy, was to add a jack there to monitor the diode load voltage, this makes their regular maintenance much much easier. NAVSHIPS-0967-063-2140 documents this.

Tim N3QE

# 1879. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 14:50:48 UTC
From: Dave <dave@dave.dave>
Message-ID: <49257948$0$31175$bd467cd0@news.dslextreme.com>
Source record: 4016
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Tim Shoppa wrote:
> On Nov 20, 8:46 am, Dave <d...@dave.dave> wrote:
>> K wrote:
>>> FA: An excellent R-390A built by ECA
>>> http://tinyurl.com/6ydbsg
>> What's the green thing by the headphone jack?
>
> A very common modification, especially by the Navy, was to add a jack
> there to monitor the diode load voltage, this makes their regular
> maintenance much much easier. NAVSHIPS-0967-063-2140 documents this.
>
> Tim N3QE

Isn't there a Diode Load terminal on the back already?

BTW: That paint job looks awful. Too shiny. I had 2 of those beasts
and liked a slightly worn look a lot better.

They aren't that difficult to tweak to superior performance. I
wouldn't spend more than $500 for one with a good RF deck.

# 1880. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 14:54:45 UTC
From: Dave <dave@dave.dave>
Message-ID: <49257a36$0$31174$bd467cd0@news.dslextreme.com>
Source record: 4017
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Tim Shoppa wrote:
> On Nov 20, 8:46 am, Dave <d...@dave.dave> wrote:
>> K wrote:
>>> FA: An excellent R-390A built by ECA
>>> http://tinyurl.com/6ydbsg
>> What's the green thing by the headphone jack?
>
> A very common modification, especially by the Navy, was to add a jack
> there to monitor the diode load voltage, this makes their regular
> maintenance much much easier. NAVSHIPS-0967-063-2140 documents this.
>
> Tim N3QE

The NAVSHIPS document states that a Dymo label should be affixed by the
jack.

# 1881. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-20 15:19:36 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <0b26492c-f2a9-4c63-945a-5dc0eee3b2ca@k36g2000yqe.googlegroups.com>
Source record: 4018
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

On Nov 20, 9:54 am, Dave <d...@dave.dave> wrote:
> Tim Shoppa wrote:
> > On Nov 20, 8:46 am, Dave <d...@dave.dave> wrote:
> >> K wrote:
> >>> FA: An excellent R-390A built by ECA
> >>>http://tinyurl.com/6ydbsg
> >> What's the green thing by the headphone jack?
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> > A very common modification, especially by the Navy, was to add a jack
> > there to monitor the diode load voltage, this makes their regular
> > maintenance much much easier. NAVSHIPS-0967-063-2140 documents this.
>
> > Tim N3QE
>
> The NAVSHIPS document states that a Dymo label should be affixed by the
> jack.

Related to your other comment, I think that the one on the E-place has
been repainted.

My yellow striper came with the decades-old Dymo stickers still
attached. I swear the glues in modern Dymo labels aren't as good.

Tim.

# 1882. Re: Viimeiset omenat, ....

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 05:10:35 UTC
From: Santtu Saarinen <saarinen@cabal.net>
Message-ID: <a.1217372068_39263@51.59.194.203>
Source record: 4019

Eilen 27.04-08 haastatteli YLE Egybtin hallitusvirkamiest�.H�n kertoi h�mm�styneen�, ettei maailmassa ole koskaan n�hty niin massiivista monikymmenmiljoonaista kansanliikett� maansa historiassa , kun nyt liikkeelle l�hteneet "leip�kapinoinnit maassaan.!" Suorastaan musertavan hiljaa on tiedotusv�lineemme olleet siit�, ett� t�llaista on tapahtunut ja n�in laajasti jo pitk��n. Egybtin t�rkein ruoka kun ei ole puhuttu riisi vaan nimenomaan maailman yleisin ruoka leip�, eli USA:n VEHN�! Samalla viitattiin, ett� Afriikkaa runnoo jo massivoituva yleinen ruokapula kautta linjan.

Samalla tutkailtiin tilannetta my�s esim V�li-Ameriikan osalta, jossa useamman maan johtajien toimesta on pidetty hiljaisuudessa n�lk�palaveereja jo pitk��n. Eli tosiaan kyse ei n�iss� n�l�nh�t�tilanteissa ole mist��n pelk�st� riisist�. Vaan nyt loppuvat ydinaavikoitumisen jaloissa niin vehn�t, lihat,maidot, juustot, riisit kuin mitk� tahansa maailman hiipuvat rehuma�ssit t�ss� ja nyt! Ydinaavikoitumisen jaloista poistui niinik�� tosiaan kalat, ja jopa hunajat. Ja ennenkaikkea my�s mehil�isp�lytteisest� ruuan tuotannostamme k�yt�nn�ss� kerralla kaikki!

Niin hurjaksi homma n�ytt�� menev�n jo t�st� tulevasta superkuivasta kes�st�, ett� t�ytyy my�t�ill� Egybtin valtiovirannomaisia. "Niin paha ruokatilanne, ettei vastaavaa olla ikin� n�hty!".. ..Jaa t�m�n kes�n sato? No sanotaan, ett� siihen verrrattuna sent��n viime vuona tuli mehil�isp�lyteruuat ja meriss� oli kaloja. Nyt on edess� tosiaan maailmanhistoriallinen hetki kun TVO:n ydinkampamaneettikasvatus vei kalat ja jopa Japanin ja USA:n ydinlauhdemeret puskee jo enemm�n meduusoja, kuin paikoin vett�. Ja t�m� mehil�iskato.. .hui kauheaa. TODELLA alkaa maalaisille l�ytym��n k�ytt�� ja ruoantuotantomy�t��!! Eli vaikkei t�st� tule selvi�m��n ydinala, sen paremmin kuin siihen loppuunsa asti sitoutuneet kansat. niin jotain hyv��. Tilaa tulee kohta hurjasti ja olen veikannut, ett� CCCP mallin mukaan vuoteen 2018 menness� alkaa ydinala olemaan sellaisessa kansanmassojen paineistuksissa, ett� vet�� vertoja tuleviin ruokar�hin�ihin. Jahka tosiaan ydinalan syyllisyys alkaa laajasti hahmottumaan tulevissa "punaisen sateitten" aikakausissamme.

Mik� ihmen punaiset sateet? No s�teilyionisaatio synnytt�� globaalin s��rintamamuutoksen vesist�mekaniikkoihin joka on kovin tuttua s�teilyionisaatioilmi�iden ry�st�ytyess� nykytyyli� mennakoivasti oikein reippaasti. Min� en miss��n tapauksessa ole mik��n "ennustelija" vaan kylm�n viile� aasianosaava fyysikko! Mm. t�m�n punaisen sateen perusfysiikkaan voi osaava tutustua mm. Hiroshiman ja Nagasagin vapaammassa historiikissa, vaikka IAEA/syyllinen USA toki kaiken kiist�� yh�.

# 1883. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 05:37:31 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <c4274c03-d9a5-404d-ad9c-d887366211a1@f13g2000yqj.googlegroups.com>
Source record: 4020

On Nov 19, 1:09 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> There are a of couple newer devices that you might like
> even more than the UC3906.  Check out the UC3909
> and BQ2031.
>
> All zeners are not created equal!  The 1N825 is a common
> temperature compensated diode and it's uncommonly good.
> Transfer standards built in the 1960's and 70's often
> used zeners... and they were good enough by golly.  The
> venerated Fluke 335D used an ion implanted or burried
> zener diode and it's still one of the most stable units
> available.
>
> Here's the deal, the battery voltage varies with temperature.
> About minus 3 to minus 5 milivolts per degree C.  Not very
> stable!  (However for temperatures between 5C to 35C it can be
> safely ignored.)
>
> Now if the circuit is exposed to the same ambient temperature
> as the battery and your reference drifts about the same amount
> and in the same direction as the battery, it can be only a good
> thing.
>
> A true zener  has a negative temperature coefficient.
> An avalanche diode has a positive temperature coefficient.
> The cross over point between the two effects is around 5.6V
> A common silicon rectifier diode has a negative 2 milivolts
> per degree C coefficient.
>
> It's not difficult to select a couple of parts that when
> combined in series will produce the minus 5 milivolts per
> degree C desired.  A 6.8V zener in series with three 1N4001
> running 1 milliamp of bias current is in the ball park.
>
> Honest to god temperature compensated charging requires a
> temperature sensor in the battery (thermistor usually)
> but it's only needed where you're charging at a rate that
> heats the battery or when charging over a very wide range
> of ambient.
>
> The above is just my opinion and all that jazz...
>

> 73,
> Grumpy

I hacked together a 10amp contant current source, actually it tuned out to be a little les than 9 amps and hooked it up between one of my 100ahr batteries and my shop type battery charger. So far it behaves as expected. I just hope it does the job as expected.

Jimmie

## 1884. WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 07:38:50 UTC
From: DaveC <me@bogusdomain.net>
Message-ID: <0001HW.C54BA58A0075A070B01AD9AF@news.sf.sbcglobal.net>
Source record: 4021
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

Looking for outdoor omni "whip" antenna for 2.4 GHz.

Is there any reason to not go for the greatest gain antenna, given that cost
is not too important (within reason)?

There are scads of these on the 'net. I'm looking for someone who has
experience with one or more of them and can make a recommendation for one.

Thanks,
--
DaveC
me@bogusdomain.net
This is an invalid return address
Please reply in the news group

# 1885. BIG TITS WOMAN

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 09:45:40 UTC
From: tyreemand@gmail.com
Message-ID: <0d866c0b-11aa-43c6-a747-6a24dc4252b0@f3g2000yqf.googlegroups.com>
Source record: 4022
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://bigtitsov.servik.com/ BIG TITS WOMAN

# 1886. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 11:28:18 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gg660n021nt@news4.newsguy.com>
Source record: 4023
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

DaveC wrote:
> Looking for outdoor omni "whip" antenna for 2.4 GHz.
>
> Is there any reason to not go for the greatest gain antenna, given that cost
> is not too important (within reason)?
>
> There are scads of these on the 'net. I'm looking for someone who has
> experience with one or more of them and can make a recommendation for one.
>
> Thanks,

Hi, not actually 2.4 Gig WiFi but cellular wireless modem card. I
bought one of the small verticals with a magnet mount and cabling for
about $15 ppd as I recall. My situation is that my house is built with
concrete/rebar construction, metal 'persiana' windows and screens and
its hard to get a signal out of here even on the various cellular bands.
I think the highest band there is 1.8 GHz.

I didn't go for gain since the path to the site is only about 1.3 miles
away so I opted for the little guy, about 7 inches tall, that just sits
on the roof. On the other hand, a friend in a different location got
himself into all sorts of problems with reflections and multiple tower
sites and is now looking for a directional antenna to minimize the clutter.

Another consideration is the vertical angle between you and the site.
The "high gain" verticals (I've seen ones claiming 14db) have a rather
flattened omni pattern so that if you have to look upwards to your
intended site you might find the gain to be considerably less, if any.

GL,
Bill
Vieques, PR

# 1887. Re: Viimeiset omenat, {SPAN}

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 13:28:34 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <7IyVk.23237$9Z6.13907@newsfe01.iad>
Source record: 4024
Cross-posted to: sfnet.atk.cbm,sfnet.atk.ohjelmointi,sfnet.tiede.bio,rec.radio.amateur.homebrew

Complaints about this Newsgroup SPAM should be sent to:<abuse@speedkom.net>,
<abuse@mci.com>,
<abuse@uu.net>,
<kuester@headlight.de>,
<abuse@ispone-business.de>

"Santtu Saarinen" <saarinen@cabal.net> wrote in message
news:a.1217372068_39263@51.59.194.203...
> Eilen 27.04-08 haastatteli YLE Egybtin hallitusvirkamiest�.H�n kertoi
> h�mm�styneen�, ettei maailmassa ole koskaan n�hty niin massiivista
> monikymmenmiljoonaista kansanliikett� maansa historiassa , kun nyt
> liikkeelle l�hteneet "leip�kapinoinnit maassaan.!" Suorastaan musertavan
> hiljaa on tiedotusv�lineemme olleet siit�, ett� t�llaista on tapahtunut ja
> n�in laajasti jo pitk��n. Egybtin t�rkein ruoka kun ei ole puhuttu riisi
> vaan nimenomaan maailman yleisin ruoka leip�, eli USA:n VEHN�! Samalla
> viitattiin, ett� Afriikkaa runnoo jo massivoituva yleinen ruokapula kautta
> linjan.
>
> Samalla tutkailtiin tilannetta my�s esim V�li-Ameriikan osalta, jossa
> useamman maan johtajien toimesta on pidetty hiljaisuudessa
> n�lk�palaveereja
> jo pitk��n. Eli tosiaan kyse ei n�iss� n�l�nh�t�tilanteissa ole mist��n
> pelk�st� riisist�. Vaan nyt loppuvat ydinaavikoitumisen jaloissa niin
> vehn�t, lihat,maidot, juustot, riisit kuin mitk� tahansa maailman hiipuvat
> rehuma�ssit t�ss� ja nyt! Ydinaavikoitumisen jaloista poistui niinik��
> tosiaan kalat, ja jopa hunajat. Ja ennenkaikkea my�s mehil�isp�lytteisest�
> ruuan tuotannostamme k�yt�nn�ss� kerralla kaikki!
>
> Niin hurjaksi homma n�ytt�� menev�n jo t�st� tulevasta superkuivasta
> kes�st�, ett� t�ytyy my�t�ill� Egybtin valtiovirannomaisia. "Niin paha
> ruokatilanne, ettei vastaavaa olla ikin� n�hty!".. ..Jaa t�m�n kes�n sato?
> No sanotaan, ett� siihen verrrattuna sent��n viime vuona tuli
> mehil�isp�lyteruuat ja meriss� oli kaloja. Nyt on edess� tosiaan
> maailmanhistoriallinen hetki kun TVO:n ydinkampamaneettikasvatus vei kalat
> ja jopa Japanin ja USA:n ydinlauhdemeret puskee jo enemm�n meduusoja, kuin
> paikoin vett�. Ja t�m� mehil�iskato.. .hui kauheaa. TODELLA alkaa
> maalaisille l�ytym��n k�ytt�� ja ruoantuotantomy�t��!! Eli vaikkei t�st�
> tule selvi�m��n ydinala, sen paremmin kuin siihen loppuunsa asti
> sitoutuneet
> kansat. niin jotain hyv��. Tilaa tulee kohta hurjasti ja olen veikannut,
> ett� CCCP mallin mukaan vuoteen 2018 menness� alkaa ydinala olemaan
> sellaisessa kansanmassojen paineistuksissa, ett� vet�� vertoja tuleviin
> ruokar�hin�ihin. Jahka tosiaan ydinalan syyllisyys alkaa laajasti

> hahmottumaan tulevissa "punaisen sateitten" aikakausissamme.
>
> Mik&#65533; ihmen punaiset sateet? No s&#65533;teilyionisaatio synnytt&#65533;&#65533; globaalin
> s&#65533;&#65533;rintamamuutoksen vesist&#65533;mekaniikkoihin joka on kovin tuttua
> s&#65533;teilyionisaatioilmi&#65533;iden ry&#65533;st&#65533;ytyess&#65533; nykytyyli&#65533; mennakoivasti oikein
> reippaasti. Min&#65533; en miss&#65533;&#65533;n tapauksessa ole mik&#65533;&#65533;n "ennustelija" vaan
> kylm&#65533;n viile&#65533; aasianosaava fyysikko! Mm. t&#65533;m&#65533;n punaisen sateen
> perusfysiikkaan voi osaava tutustua mm. Hiroshiman ja Nagasagin
> vapaammassa
> historiikissa, vaikka IAEA/syyllinen USA toki kaiken kiist&#65533;&#65533; yh&#65533;.
>

## 1888. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 14:00:09 UTC
From: Bill Kearney <wkearney99@hotmail.com>
Message-ID: <FfCdnaXCtoZ3I7vUnZ2dnUVZ_gydnZ2d@speakeasy.net>
Source record: 4025
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

"DaveC" <me@bogusdomain.net> wrote in message
news:0001HW.C54BA58A0075A070B01AD9AF@news.sf.sbcglobal.net...
> Looking for outdoor omni "whip" antenna for 2.4 GHz.

Whip antenna? What is this, for a vehicle? For a stationary location it seems like it'd be an extremely bad idea to use an antenna that 'whipped' around.

> Is there any reason to not go for the greatest gain antenna, given that
> cost
> is not too important (within reason)?

Alligator effect. Wide mouth receiving everything. If you don't need to pickup everything then why bother? It just makes it harder for your WiFi router to cut through all the noise of distant stations it doesn't communicate with. Get the right antenna suited for your installation, no more, no less.

Which leads to the constant request, when you ask a question POST WHAT GEAR YOU'RE USING.

In your case it would also help to define what sort of connection you're trying to make. Point to point, metropolitan, etc.

-Bill Kearney

# 1889. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 14:19:32 UTC
From: Dave <dave@dave.dave>
Message-ID: <4926c374$0$31141$bd467cd0@news.dslextreme.com>
Source record: 4026
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Tim Shoppa wrote:
> On Nov 20, 9:54 am, Dave <d...@dave.dave> wrote:
>> Tim Shoppa wrote:
>>> On Nov 20, 8:46 am, Dave <d...@dave.dave> wrote:
>>>> K wrote:
>>>>> FA: An excellent R-390A built by ECA
>>>>> http://tinyurl.com/6ydbsg
>>>> What's the green thing by the headphone jack?
>>> A very common modification, especially by the Navy, was to add a jack
>>> there to monitor the diode load voltage, this makes their regular
>>> maintenance much much easier. NAVSHIPS-0967-063-2140 documents this.
>>> Tim N3QE
>> The NAVSHIPS document states that a Dymo label should be affixed by the
>> jack.
>
> Related to your other comment, I think that the one on the E-place has
> been repainted.
>
> My yellow striper came with the decades-old Dymo stickers still
> attached. I swear the glues in modern Dymo labels aren't as good.
>
> Tim.
But the P-touch makes suitable substitutes that look great and adhere
very well.

## 1890. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-21 14:26:00 UTC
From: Dave <dave@dave.dave>
Message-ID: <4926c4f8$0$31141$bd467cd0@news.dslextreme.com>
Source record: 4027
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

```
Bill Kearney wrote:
> "DaveC" <me@bogusdomain.net> wrote in message
> news:0001HW.C54BA58A0075A070B01AD9AF@news.sf.sbcglobal.net...
>> Looking for outdoor omni "whip" antenna for 2.4 GHz.
>
> Whip antenna? What is this, for a vehicle? For a stationary location it
> seems like it'd be an extremely bad idea to use an antenna that 'whipped'
> around.
>
>> Is there any reason to not go for the greatest gain antenna, given that
>> cost
>> is not too important (within reason)?
>
> Alligator effect. Wide mouth receiving everything. If you don't need to
> pickup everything then why bother? It just makes it harder for your WiFi
> router to cut through all the noise of distant stations it doesn't
> communicate with. Get the right antenna suited for your installation, no
> more, no less.
>
> Which leads to the constant request, when you ask a question POST WHAT GEAR
> YOU'RE USING.
>
> In your case it would also help to define what sort of connection you're
> trying to make. Point to point, metropolitan, etc.
>
> -Bill Kearney
>
>
Short Pringle's can, 1/4 wave probe, 1/2 wave from closed end, soldered
to female TNC.
```

## 1891. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 00:22:15 UTC
From: ps56k <pschuman_no_spam_me@interserv.com>
Message-ID: <2hIVk.8327$be.2733@nlpi061.nbdc.sbc.com>
Source record: 4028
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

"Bill Kearney" <wkearney99@hotmail.com> wrote in message
news:FfCdnaXCtoZ3I7vUnZ2dnUVZ_gydnZ2d@speakeasy.net...
>
> "DaveC" <me@bogusdomain.net> wrote in message
> news:0001HW.C54BA58A0075A070B01AD9AF@news.sf.sbcglobal.net...
>> Looking for outdoor omni "whip" antenna for 2.4 GHz.
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> Whip antenna? What is this, for a vehicle? For a stationary location it
> seems like it'd be an extremely bad idea to use an antenna that 'whipped'
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> router to cut through all the noise of distant stations it doesn't
> communicate with. Get the right antenna suited for your installation, no
> more, no less.
>
> Which leads to the constant request, when you ask a question POST WHAT
> GEAR YOU'RE USING.
>
> In your case it would also help to define what sort of connection you're
> trying to make. Point to point, metropolitan, etc.
>
> -Bill Kearney
Since you have included the HAM radio newsgroups as your first choices,
with the Internet Wireless as your last choice,
then - as was mentioned above - what are you trying to accomplish
with this 2.4Ghz outdoor antenna ??

Since you used the term "whip" it tends to imply some physical motion or
vehicle,
vs a "vertical" which implies a stationary location.
And both imply a omni pattern - like a general Access Point -

## 1892. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 01:22:02 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <gb6dneuUo5Ygw7rUnZ2dnUVZ8qbinZ2d@pipex.net>
Source record: 4029
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

Dave wrote:
> Short Pringle's can, 1/4 wave probe, 1/2 wave from closed end, soldered
> to female TNC.
==========
Yes these cans work well ; the problem is the type and length of coax .
A suitable arangement is a WiFi router near the antenna (if necessary in
a wx proof box ) with an ethernet cat5 cable running to the equipment.

Another possibility is a USB WiFi adaptor in the focal point of a
satellite dish with a USB to ethernet converter.

Frank KN6WH

# 1893. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 01:47:25 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <e3cf8449-a500-4d01-9692-0d6159cd42d3@q9g2000yqc.googlegroups.com>
Source record: 4030
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Nov 21, 2:38 am, DaveC <m...@bogusdomain.net> wrote:
> Looking for outdoor omni "whip" antenna for 2.4 GHz.
>
> Is there any reason to not go for the greatest gain antenna, given that cost
> is not too important (within reason)?
>
> There are scads of these on the 'net. I'm looking for someone who has
> experience with one or more of them and can make a recommendation for one.
>
> Thanks,
> --
> DaveC
> m...@bogusdomain.net
> This is an invalid return address
> Please reply in the news group

I recently built a Franklin antenna for 2.4Ghz.
I highly reccommend it. Google WiFi and franklin antenna.

Jimmie

# 1894. Re: Battery charger

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 02:06:37 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <2224c555-8137-4d77-b05d-9eaadcafdff6@41g2000yqf.googlegroups.com>
Source record: 4031

On Nov 19, 1:09 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> Howdy,
>
> There are a of couple newer devices that you might like
> even more than the UC3906.  Check out the UC3909
> and BQ2031.
> 73,
> Grumpy

Yes indeed the 3909 is a switch mode version of the 3906 and the
BQ2031 is a pulsed version. The 3906 uses a constant current source
and I used 10 amp and mine turned out to be like 9 amps in real life,
I forgot how many feet of 14AWG wire I used for the 10 map sense. Some
say pulsed or pwm is the way to go. Maximizing the PWM to fast charge
a battery would be advantageous. I think that's what they are using in
the hybrid cars.

73 OM
n8zu

## 1895. Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 02:30:24 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gg7qs402stp@news1.newsguy.com>
Source record: 4032

This is a really dumb question but it dawned on me that I did not know the correct answer.

In terms of old transmitters from the 20s/30s...In a crystal oscillator I understand the concept of setting the oscillator output tank to favor the harmonic from the crystal. (Stop me if I'm wrong already...)

But in a doubling amplifier stage am I counting on having enough harmonic content at the input or am I creating the harmonic with the non-linearity of the amplifier?

TIA
-Bill WX4A

# 1896. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 04:24:29 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <3QLVk.9206$V71.1057@newsfe10.iad>
Source record: 4033

"exray" <radioexray@geeemail.com> wrote in message
news:gg7qs402stp@news1.newsguy.com...
> In terms of old transmitters from the 20s/30s...In a crystal oscillator I
> understand the concept of setting the oscillator output tank to favor the
> harmonic from the crystal. (Stop me if I'm wrong already...)
>
> But in a doubling amplifier stage am I counting on having enough harmonic
> content at the input or am I creating the harmonic with the non-linearity
> of the amplifier?
>
> TIA
> -Bill WX4A

Hi Bill.

Remember that single ended frequency multiplier stages are usually operated in Class-C where the nonlinear operation of the stage produces the harmonics. In a Class-C stage, the grid (of the tube since we are talking about vintage transmitters) is biased such that the plate current only flows in short pulses. The narrower the pulse width, the greater the harmonic generation of the stage. If you look in the old RCA Transmitting Tube Manual, there is a design procedure where the "conduction angle" of the tube is chosen for proper harmonic generation.

Frequency doubling is unique in that two Class-B stages may be used in a push-push arrangement. Here the grids are driven in push-pull while the plates are connected together in parallel. The resulting waveform will essentially be the equivalent of full-wave rectification of the input signal. Without going into Fourier series, the resultant waveform only contains even harmonics of the input signal while the fundamental driving frequency is cancelled out.

Fortunately I was already a ham operator when my high school math class taught Fourier series *. I immediately saw the practical value of this mathematical concept and it made good sense to me. Your question is a good one and reading some of the tutorials on Fourier series (do a Google search) will be very useful to your understanding of harmonic generation and intermodulation distortion. I hope that my simple explanation will start you in your own exploration.

73, Barry L. Ornitz WA4VZQ

* More years ago that I care to admit! :-)

# 1897. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 04:32:01 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gg82040d52@news4.newsguy.com>
Source record: 4034

NoSPAM wrote:

>
> Remember that single ended frequency multiplier stages are usually operated
> in Class-C where the nonlinear operation of the stage produces the
> harmonics. In a Class-C stage, the grid (of the tube since we are talking
> about vintage transmitters) is biased such that the plate current only flows
> in short pulses.

Thanks Barry, I get it. I was becoming distracted by some of the old
1930s articles touting the tritet osc for its ability to create more
harmonic output (true) for directly driving following stages.

I suppose thats just another way of reaching the same goal.

(btw, haven't heard from you in years - I recall your great input over
on r.a.r. +p. No, it hasn't changed )

-Bill

## 1898. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 05:51:16 UTC
From: DaveC <me@bogusdomain.net>
Message-ID: <0001HW.C54CDDD400BED186B01AD9AF@news.sf.sbcglobal.net>
Source record: 4035
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> Since you used the term "whip" it tends to imply some physical motion or
> vehicle,
> vs a "vertical" which implies a stationary location.
> And both imply a omni pattern - like a general Access Point -

-=-=-=-

OK, time to clarify...

Wifi (2.4 GHz). outdoor omni vertical (not whip), permanent mount on pole, to be connected (very short pigtail) to pole-mounted wifi router in client mode. Max output: 250 mW.

Is it true that the higher the gain the flatter the "donut" shape of the sensitivity field?

(And yes, my terminology is rudimentary... please forgive.)

Thanks,
--
DaveC
me@bogusdomain.net
This is an invalid return address
Please reply in the news group

## 1899. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 06:13:29 UTC
From: ps56k <pschuman_no_spam_me@interserv.com>
Message-ID: <gqNVk.853$jZ1.698@flpi144.ffdc.sbc.com>
Source record: 4036
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

DaveC wrote:
>> Since you used the term "whip" it tends to imply some physical
>> motion or vehicle,
>> vs a "vertical" which implies a stationary location.
>> And both imply a omni pattern - like a general Access Point -
>
> -=-=-=-
>
> OK, time to clarify...
>
> Wifi (2.4 GHz). outdoor omni vertical (not whip), permanent mount on
> pole, to be connected (very short pigtail) to pole-mounted wifi
> router in client mode. Max output: 250 mW.
>
> Is it true that the higher the gain the flatter the "donut" shape of
> the sensitivity field?
>
> (And yes, my terminology is rudimentary... please forgive.)
>
> Thanks,
> --
> DaveC

dropped the x-posting to the ham groups -
--

why omni on a pole in "client mode" ?

If you are attemtping to connect to a specific Access Point,
this has been discussed here zillions of times,
and there are other questions, clarifications, and solutions available -
other than an omni -
Where are you in relation to the Access Point, how far, line of sight, etc

This requires a little different "thinking" than just putting up a bigger
stick
to talk to a 2m, 220, or 450 repeater -

## 1900. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 06:24:55 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gg88jr02o7e@news5.newsguy.com>
Source record: 4037
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

DaveC wrote:

> Is it true that the higher the gain the flatter the "donut" shape of the
> sensitivity field?
>
> (And yes, my terminology is rudimentary... please forgive.)

I'm the one who initially committed than terminological crime so forgive ME! Where is that big omni gain going to come from if not from the vertical beamwidth? Start with the isotropic model pictured as a spherical balloon. Squeeze it however you want to. Nothing about an antenna can add volume to the model, its just a matter of how you squeeze it.

-Bill

# 1901. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 07:04:23 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <06afi4tsteermjpdbkmlhjf1orddgrude6@4ax.com>
Source record: 4038

On Fri, 21 Nov 2008 22:30:24 -0400, exray <radioexray@geeemail.com>
wrote:

>This is a really dumb question but it dawned on me that I did not know
>the correct answer.
>
>In terms of old transmitters from the 20s/30s...In a crystal oscillator
> I understand the concept of setting the oscillator output tank to
>favor the harmonic from the crystal. (Stop me if I'm wrong already...)

In an overtone oscillator, the resonator actually forces the crystal
to mechanically resonate at 1/3, 1/5, 1/7, 1/9 etc. of the crystal
width. Due to the end effects, the frequency is *not* _exactly_ 3, 5,
7, 9 etc. times the fundamental frequency, but quite close. In
principle, the oscillator is producing a single frequency, the
(harmonic) mechanical resonance frequency of the crystal.

>But in a doubling amplifier stage am I counting on having enough
>harmonic content at the input or am I creating the harmonic with the
>non-linearity of the amplifier?

The non-linearity of the stage will produce the harmonics, which are
_exact_ integer multipliers of the input frequency. Symmetrically
clipping stages generate strong odd harmonics, while asymmetric
stages create strong even harmonics. The following stages need to
filter out the desired harmonics.

So if you need exactly 30.000... MHz, you either have to use a
10.000... MHz fundamental crystal oscillator followed by a tripler
(and filtering stage) or order an _overtone_ crystal for exactly
30.000... MHz.

Running a nominally 10.000... MHz fundamental mode crystal in an
overtone oscillator tuned at 30 MHz will not produce exactly 30.000...
MHz but something quite closely, due to the end effect.

Paul OH3LWR

## 1902. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 07:15:43 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <b1cfi4ddpgnrqsheqf1mk3i782r0mcjsfe@4ax.com>
Source record: 4039
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Fri, 21 Nov 2008 21:51:16 -0800, DaveC <me@bogusdomain.net> wrote:

>Is it true that the higher the gain the flatter the "donut" shape of the
>sensitivity field?

That is the only way to get actual gain from a (horizontally)
omnidirectional antenna (excluding any MIMO designs).

Flattening the vertical radiation pastern may have severe drawbacks
especially if the mast is swinging in the wind or some weak (e.g.
indoors) users are close to the base of the mast.

Paul OH3LWR

# 1903. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 08:04:41 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <iq2dnWt8svDkIrrUnZ2dnUVZ_rTinZ2d@giganews.com>
Source record: 4040

>> On Oct 31, 5:47 pm, Ralph Mowery wrote:
>> I was given this Weller soldering station. The display is not working. It
>> does flash 888 on it when first turned on. The tip does heat up, but I
>> have
>> not determined if I can vary the heat or not. Also have an extra
>> soldering
>> pencle that plugs in it. Changed them to see if the display would light,
>> but it did not. Any hints on it ?

> Telstar Electronics wrote:
> They gave it to you because Weller stuff is junk. I have seen more
> Weller soldering stations fail then I care to remember over the years.
> Don't spend a lot of time on it. Break down and buy a Hexacon station.
> We have four here. They have worked flawlessly for over ten years with
> heavy use.

No... they gave it to him because it didn't cost much and was defective. At my current place of employ, we have many Weller EC-series soldering stations and over the 6 years I've been there, I've seen only a couple of failures. In 30+ years in radio/electronics, I haven't seen many failures of these units. I recently bought a new WES50 for myself and am very satisfied. Tips are widely available and inexpensive.

Bryan WA7PRC

## 1904. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 16:47:04 UTC
From: Bill Kearney <wkearney99@hotmail.com>
Message-ID: <3K-dnZg7rqMVqrXUnZ2dnUVZ_obinZ2d@speakeasy.net>
Source record: 4041
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> OK, time to clarify...

You still don't describe what sort of connection you're trying to make.

## 1905. FA: EAC R-390A

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 19:17:13 UTC
From: K <K@spam.net>
Message-ID: <49285abc$0$4867$9a6e19ea@unlimited.newshosting.com>
Source record: 4042
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FA: very nice EAC R-390A click here http://tinyurl.com/556eo5

K

# 1906. Re: FA: R-390A built by ECA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 19:24:19 UTC
From: highlandham <rfburns@nospam.sco>
Message-ID: <MoKdnbyAK710UbXUnZ2dneKdnZzinZ2d@pipex.net>
Source record: 4050
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

>> My yellow striper came with the decades-old Dymo stickers still
>> attached. I swear the glues in modern Dymo labels aren't as good.
>>
>> Tim.
> But the P-touch makes suitable substitutes that look great and adhere
> very well.
==========
If you mean the P-touch from Brother, yes that's an excellent type of
label(er)

Frank

## 1907. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 19:42:04 UTC
From: highlandham <rfburns@nospam.sco>
Message-ID: <ftKdnfQTmcyKTLXUnZ2dnUVZ8qydnZ2d@pipex.net>
Source record: 3901
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> I have need of a directional antenna for a 30 foot path within the house.
> (the microwave oven wipes out the signal).
>
> Do you have any better details on construction?
==========
If your WiFi device is near the microwave oven , you indeed have a problem.
In my situation the oven is away (approx 7 - 8 metres) from the Wifi
system ,both router and laptop ,and I no longer had interference when
setting the WiFI System to the highest frequency (channel) with the
microwave oven freq at about 2390MHz.

Frank KN6WH

## 1908. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 20:08:54 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <55fa82bf-331e-47b1-b0ad-e02e009eb7b0@20g2000yqt.googlegroups.com>
Source record: 4043
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Nov 21, 8:47 pm, JIMMIE <jimmi...@gmail.com> wrote:
> On Nov 21, 2:38 am, DaveC <m...@bogusdomain.net> wrote:
>
> > Looking for outdoor omni "whip" antenna for 2.4 GHz.
>
> > Is there any reason to not go for the greatest gain antenna, given that cost
> > is not too important (within reason)?
>
> > There are scads of these on the 'net. I'm looking for someone who has
> > experience with one or more of them and can make a recommendation for one.
>
> > Thanks,
> > --
> > DaveC
> > m...@bogusdomain.net
> > This is an invalid return address
> > Please reply in the news group
>
> I recently built a Franklin antenna for 2.4Ghz.
> I highly reccommend it. Google WiFi and franklin antenna.
>
> Jimmie

Also look up AMOS antenna. They are easy to make and work well

Jimmie

## 1909. SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 20:13:37 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gg9p5k0pp0@news3.newsguy.com>
Source record: 4044

I've got a cheapo CB swr meter which I thought might be suitable for some HF QRP work. Problem is that it is very insensitive on the HF freqs. Can't even get more than about 20% of the scale with 5 watts on 40 meters.

It uses a stripline for pickup and I'm wondering if maybe I should replace that with a broadband toroid configuration. Any specific recommendations? How about adding some gimmick capacitance across the stripline to increase coupling?

TIA,
Bill WX4A

# 1910. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-22 22:51:45 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <822d8ac4-2cd3-4b89-9102-8909c30058e8@v38g2000yqb.googlegroups.com>
Source record: 4045

On Nov 22, 3:13 pm, exray <radioex...@geeemail.com> wrote:
> I've got a cheapo CB swr meter which I thought might be suitable for
> some HF QRP work.  Problem is that it is very insensitive on the HF
> freqs.  Can't even get more than about 20% of the scale with 5 watts on
> 40 meters.
>
> It uses a stripline for pickup and I'm wondering if maybe I should
> replace that with a broadband toroid configuration.  Any specific
> recommendations?  How about adding some gimmick capacitance across the
> stripline to increase coupling?
>
> TIA,
> Bill WX4A

I would take a look at some DIY projects for SWR meters and see if I
could use the box and meter.
I had the same problem with a meter I bought at a yard sell. I liked
it because it had a big 5" meter and a fairly decent built in 50 watt
dummy load.
Price was right too $1. I rebuilt it per plans in an ARRL pub. This
one had a stripline pickup and there was enough room in the box to
double the length, that was my first consideration, but I ended up
using a toroid transformer instead..

Jimmie

## 1911. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 02:18:39 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <343Wk.311$QX3.169@nwrddc02.gnilink.net>
Source record: 4046
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

"Dave" <dave@dave.dave> wrote in message
news:4926c4f8$0$31141$bd467cd0@news.dslextreme.com...
> Bill Kearney wrote:
>> "DaveC" <me@bogusdomain.net> wrote in message
>> news:0001HW.C54BA58A0075A070B01AD9AF@news.sf.sbcglobal.net...
>>> Looking for outdoor omni "whip" antenna for 2.4 GHz.
>>
>> Whip antenna? What is this, for a vehicle? For a stationary location it
>> seems like it'd be an extremely bad idea to use an antenna that 'whipped'
>> around.
>>
>>> Is there any reason to not go for the greatest gain antenna, given that
>>> cost
>>> is not too important (within reason)?
>>
>> Alligator effect. Wide mouth receiving everything. If you don't need to
>> pickup everything then why bother? It just makes it harder for your WiFi
>> router to cut through all the noise of distant stations it doesn't
>> communicate with. Get the right antenna suited for your installation, no
>> more, no less.
>>
>> Which leads to the constant request, when you ask a question POST WHAT
>> GEAR YOU'RE USING.
>>
>> In your case it would also help to define what sort of connection you're
>> trying to make. Point to point, metropolitan, etc.
>>
>> -Bill Kearney
> Short Pringle's can, 1/4 wave probe, 1/2 wave from closed end, soldered to
> female TNC.
-
I have need of a directional antenna for a 30 foot path within the house.
(the microwave oven wipes out the signal).

Do you have any better details on construction?

# 1912. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 02:43:38 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0811230222280.12668@sdf.lonestar.org>
Source record: 4047

On Fri, 21 Nov 2008, exray wrote:

> Date: Fri, 21 Nov 2008 22:30:24 -0400
> From: exray <radioexray@geeemail.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Doubling
>
> This is a really dumb question but it dawned on me that I did not know the
> correct answer.
>
> In terms of old transmitters from the 20s/30s...In a crystal oscillator I
> understand the concept of setting the oscillator output tank to favor the
> harmonic from the crystal. (Stop me if I'm wrong already...)

I think this is correct, but the books say that tuning the output of the oscillator can "pull" the frequency of the oscillating crystal. I have sometimes seen this.

> But in a doubling amplifier stage am I counting on having enough harmonic
> content at the input or am I creating the harmonic with the non-linearity of
> the amplifier?

Despite what at least one other person responding to this said, I can rest assure you that if you run a doubler/multiplier stage even in a linear mode, AND if you tune the output of that stage to the multiple harmonic, you will definitely get output at that harmonic frequency which is stronger than the input drive voltage. In the last few years I have built many tube stages and observed the harmonic voltage output on a wideband oscilloscope. As a matter of fact if you ever get a wideband scope and look at the locked output waveform as you tune through the both the fundamental and the harmonic frequency you will be very surprised at what you will see. All of the descriptions in all of the handbooks I have read (a few) explain this from a theoretical perspective but don't bother to actually show, with photographs of actual scope traces, how this works. It would just take an extra page or two and would make people think about what they are doing.

All amplifiers have some non-linearity, the question is what effect this has on you meeting "purity" of emissions requirements. The more important question is whether you are getting the gain/drive that you want from a given stage of amplification. Reducing unwanted spurious emissions might require more tuned circuits or measurement using a receive with an S-meter and operated many wavelengths from your antenna. Most "appliance operators" just buy a commercial rig and don't worry about anything; homebrewers might not worry either if their signals go through a tuned circuit, an antenna tuner, and an antenna for a narrow frequency range.

If you really want to blow your mind, then hook an oscilloscope to the output of a mixer with two low harmonic content input sine waves to be mixed. The raw output will look like hell on a scope. The only way to see the mixed (say, difference) frequency will be to go through at least a couple of tuned circuits that are tuned for the wanted sine wave frequency.

I've done this stuff. There are a couple of other minor matters that are not quite correct in our ham handbooks, too.

> TIA
> -Bill WX4A
>

# 1913. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 02:52:13 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0811230244570.12668@sdf.lonestar.org>
Source record: 4048

On Sat, 22 Nov 2008, exray wrote:

> Date: Sat, 22 Nov 2008 16:13:37 -0400
> From: exray <radioexray@geeemail.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: SWR meter
>
> I've got a cheapo CB swr meter which I thought might be suitable for some HF
> QRP work. Problem is that it is very insensitive on the HF freqs. Can't
> even get more than about 20% of the scale with 5 watts on 40 meters.

I've used those cheapo CB SWR meters, too, and yes at low HF they are not
so sensitive even with the sensitivity turne as high as it can go.

What is more important is the meter reading on "reflected" compared to
"forward". As long as the reflected is much lower (roughly 1/4 or less)
than forward, you should be OK. Most scales I've seen will have a
calibration such that reflected at about half the scale as forward means
an SWR of about three to one. One of my meters has this point at 2/3 of
full scale. I have always felt satisfied if I can get reflected down to
one tenth, or less, of forward by manipulating the antenna tuner.

If you want to be a purist, then you might also consider locating a more
sensitive meter, say 20-50 microamps DC and using that. Most of those
internal meters are 100-200 microamps DC. Or, make the modification you
describe below.

> It uses a stripline for pickup and I'm wondering if maybe I should replace
> that with a broadband toroid configuration. Any specific recommendations?
> How about adding some gimmick capacitance across the stripline to increase
> coupling?

I'm not sure it is worth the work to try this, but I don't have a good
recommendation or preference to emphasize.

> TIA,
> Bill WX4A
>

## 1914. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 03:09:10 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <ggahgp0283j@news6.newsguy.com>
Source record: 4049

Stray Dog wrote:
>
> On Sat, 22 Nov 2008, exray wrote:
>
>> Date: Sat, 22 Nov 2008 16:13:37 -0400
>> From: exray <radioexray@geeemail.com>
>> Newsgroups: rec.radio.amateur.homebrew
>> Subject: SWR meter
>>
>> I've got a cheapo CB swr meter which I thought might be suitable for
>> some HF QRP work. Problem is that it is very insensitive on the HF
>> freqs. Can't even get more than about 20% of the scale with 5 watts
>> on 40 meters.
>
> I've used those cheapo CB SWR meters, too, and yes at low HF they are
> not so sensitive even with the sensitivity turne as high as it can go.
>
> What is more important is the meter reading on "reflected" compared to
> "forward". As long as the reflected is much lower (roughly 1/4 or less)
> than forward, you should be OK. Most scales I've seen will have a
> calibration such that reflected at about half the scale as forward means
> an SWR of about three to one. One of my meters has this point at 2/3 of
> full scale. I have always felt satisfied if I can get reflected down to
> one tenth, or less, of forward by manipulating the antenna tuner.
>
> If you want to be a purist, then you might also consider locating a more
> sensitive meter, say 20-50 microamps DC and using that. Most of those
> internal meters are 100-200 microamps DC. Or, make the modification you
> describe below.
>
>> It uses a stripline for pickup and I'm wondering if maybe I should
>> replace that with a broadband toroid configuration. Any specific
>> recommendations? How about adding some gimmick capacitance across the
>> stripline to increase coupling?
>
> I'm not sure it is worth the work to try this, but I don't have a good
> recommendation or preference to emphasize.
>
>> TIA,
>> Bill WX4A
>>
>
Well, this little dilly has several wattage ranges, calibrated at 27 MHz
of course, as well as the 'adjust to full scale, flip to REV' for SWR

readings. I could not get anywhere near full scale with the setting.

I did add some additional capacitance off of the stripline and am now within range of the thing. It took about 10pf, a gimmick wasn't enough. Celebrating that success I reset the lowest ranges of the wattmeter (5 and 50 watts) to read accurately at 7 MHz. I have no fantasies about the linearity of the circuit now nor any fantasy that the other ham bands will read anywhere even close wattage-wise but it seems just the ticket for 40 meters.

If I get enthusiastic I might try a ferrite transformer and just see how much flatter that might be across the bands.

73,
Bill

# 1915. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 14:05:03 UTC
From: Knight <petelarosa@comcast.net>
Message-ID: <ad1aef1d-2981-48be-bdd9-03ff4c8e51e6@v38g2000yqb.googlegroups.com>
Source record: 3902
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

Guys! I've been selling these Biquads for a long time now and
everyone absolutely
loves them.
Check em out here... http://www.biquadantenna.com
Sold 30 just this month alone, and get emails all the time from
clients
on how good their performance is.
If it doesn't work, you get your money back! (minus shipping of
course)

Thanks for looking!
Pete

On Nov 22, 2:42 pm, highlandham <rfbu...@nospam.sco> wrote:
> > I have need of a directional antenna for a 30 foot path within the house.
> > (the microwave oven wipes out the signal).
>
> > Do you have any better details on construction?
>
> ==========
> If  your WiFi device is near the microwave oven , you indeed have a problem.
> In my situation the oven is away (approx 7 - 8  metres) from the Wifi
> system ,both router and laptop ,and I no longer had interference when
> setting the WiFI System to the highest frequency (channel) with the
> microwave oven freq at about 2390MHz.
>
> Frank   KN6WH

## 1916. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 14:55:56 UTC
From: JB <nospam@goofball.net>
Message-ID: <0aeWk.371$QX3.10@nwrddc02.gnilink.net>
Source record: 3903
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> -
> I have need of a directional antenna for a 30 foot path within the house.
> (the microwave oven wipes out the signal).
>
Yikes! I have never seen that. I would be concerned about leakage.
Sometimes I have torn into things and found stupid stuff like paint over
grounding surfaces or rust in the compartment. There is a critical ground
around the probe entrance.

My microwave oven is in the far corner of the house and I run 100 watts on
VHF and 600 on HF at times and never had trouble. I never tried the laptop
in the kitchen for fear of spillage. The Linksys is essentially on the
floor to keep people in the park next door from ripping up my bandwidth.
(although sometimes I would prefer geeks hanging out there to chase the rest
out) No coverage problems at all. I do have an HT that gets "some"
interference when I set it on top of the oven.

# 1917. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 16:03:20 UTC
From: JB <nospam@goofball.net>
Message-ID: <c9fWk.393$us6.264@nwrddc01.gnilink.net>
Source record: 3904

"exray" <radioexray@geeemail.com> wrote in message
news:gg9p5k0pp0@news3.newsguy.com...
> I've got a cheapo CB swr meter which I thought might be suitable for
> some HF QRP work. Problem is that it is very insensitive on the HF
> freqs. Can't even get more than about 20% of the scale with 5 watts on
> 40 meters.
>
> It uses a stripline for pickup and I'm wondering if maybe I should
> replace that with a broadband toroid configuration. Any specific
> recommendations? How about adding some gimmick capacitance across the
> stripline to increase coupling?
>
> TIA,
> Bill WX4A

You might find they used 1n4148 diodes just to be cheap. Try Germanium like 1n270.

I built one out of the Handbook back in the 70's they called the Monimatch using a circuit board stripline. It was easy to cut rather than etching. I don't remember the year.

In the 78 issue there is one as you describe. The broadband torroid sensors are about standard in the autotuners and in some radios because they tune up at low power. They are small and don't add much inductance. You might even build it into a qrp rig and use a multi function meter scrapped out of an old tape recorder or a led bar graph.

## 1918. Seiwa Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 17:57:00 UTC
From: Howard <howardwj@ntlworld.com>
Message-ID: <RPgWk.6412$Dr1.2247@newsfe29.ams2>
Source record: 3905

Can anyone please tell me the input and output impedances of a Seiwa Corporation Crystal Filter Model YF-90F2.5B.
Thanks. Howard.

# 1919. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 18:07:01 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <vf-dnUriavxVBrTUnZ2dnUVZ8tPinZ2d@pipex.net>
Source record: 3906

> In the 78 issue there is one as you describe. The broadband torroid sensors
> are about standard in the autotuners and in some radios because they tune up
> at low power. They are small and don't add much inductance. You might even
> build it into a qrp rig and use a multi function meter scrapped out of an
> old tape recorder or a led bar graph.
==========
High intensity LEDs (for example those as used in traffic lights ,225 ea
per light) already light-up at 45 microampere and hence can be directly
used as a reflected power indicator instead of a meter.

Frank KN6WH

# 1920. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-23 23:32:02 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <1lnji49vl1nulfrb9go7ker43dro840p2v@4ax.com>
Source record: 3907
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Sat, 22 Nov 2008 12:08:54 -0800 (PST), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>On Nov 21, 8:47ï¿½pm, JIMMIE <jimmi...@gmail.com> wrote:
>> I recently built a Franklin antenna for 2.4Ghz.
>> I highly reccommend it. Google WiFi and franklin antenna.
>> Jimmie

>Also look up AMOS antenna. They are easy to make and work well
>Jimmie

AMOS, Franklin, Sector, et al:
<http://pe2er.nl/wifisector/>
<http://yu1aw.ba-karlsruhe.de/vhf_ant.htm>
<http://www.qsl.net/yu1aw/vhf_ant.htm>
<http://www.brest-wireless.net/gallery/AntenneAmos>
<http://www.brest-wireless.net/wiki/materiel:amos>
<http://www.brest-wireless.net/forum/viewtopic.php?id=75&p=2>

NEC2 model:
<http://802.11junk.com/jeffl/antennas/AMOS-7/>
<http://802.11junk.com/jeffl/antennas/AMOS-5/> (not optimized yet)

AMOS design:
<http://www.qsl.net/yu1aw/amos_article.pdf>

Inverted AMOS:
<http://www.qsl.net/yu1aw/invertamos.pdf>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

## 1921. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 00:06:15 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <ggcr5n$3q1$1@news.motzarella.org>
Source record: 3908
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

"JB" <nospam@goofball.net> wrote in message
news:0aeWk.371$QX3.10@nwrddc02.gnilink.net...
>> -
>> I have need of a directional antenna for a 30 foot path within the house.
>> (the microwave oven wipes out the signal).
>>
> Yikes! I have never seen that. I would be concerned about leakage.
> Sometimes I have torn into things and found stupid stuff like paint over
> grounding surfaces or rust in the compartment. There is a critical ground
> around the probe entrance.
>
>
The laptop computer is downstairs about 10 feet from the microwave, and the
wireless router is upstairs about 30 feet away with a desktop(and the path
goes through three walls and the floor. The microwave doesn't wipe out the
laptop, but slows things down a bit. A directional antenna would solve the
problem. I'm not trying to increase range at all.

## 1922. Danby Mirowave Oven = lousy faraday cage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 00:20:51 UTC
From: Alan Cruikshank <ascshank@netremovescape.net>
Message-ID: <IrmWk.26027$VN1.10274@newsfe02.iad>
Source record: 3909

I have a Motorola Cordless Phone model SD4551, and a Danby Mirowave oven model DMW902W(-1). I tried putting the cordless handset into the closed microwave and sucessfully paged it. Should I be worried?

# 1923. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 00:39:57 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <aqtji4dtdh33fj33k0ge2h8lrmsco4e2d6@4ax.com>
Source record: 3910
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Sun, 23 Nov 2008 15:32:02 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>NEC2 model:
><http://802.11junk.com/jeffl/antennas/AMOS-7/>
><http://802.11junk.com/jeffl/antennas/AMOS-5/> (not optimized yet)

Fixed. I was feeling guilty so I ran it through the optimizer in
4NEC2. I haven't built a 5 dipole AMOS yet using these dimensions.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 1924. Re: Danby Mirowave Oven = lousy faraday cage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 00:40:29 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <5e6add86-6141-4d22-b497-d8e77b78221b@a37g2000pre.googlegroups.com>
Source record: 3911

On Nov 23, 4:20 pm, "Alan Cruikshank" <ascsh...@netremovescape.net>
wrote:
> I have a Motorola Cordless Phone model SD4551, and a Danby Mirowave oven
> model DMW902W(-1). I tried putting the cordless handset into the closed
> microwave and sucessfully paged it. Should I be worried?

Typically the RF seal on a microwave oven is resonant, and I would not
be surprised if it leaks RF at frequencies somewhat removed from the
oven operating frequency.

Cheers,
Tom

# 1925. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 00:50:13 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <5c5e8867-73d9-4bd1-8b0e-4b3778f5f1c2@z28g2000prd.googlegroups.com>
Source record: 3912

On Nov 22, 7:09 pm, exray <radioex...@geeemail.com> wrote:
> Stray Dog wrote:
>
> > On Sat, 22 Nov 2008, exray wrote:
>
> >> Date: Sat, 22 Nov 2008 16:13:37 -0400
> >> From: exray <radioex...@geeemail.com>
> >> Newsgroups: rec.radio.amateur.homebrew
> >> Subject: SWR meter
>
> >> I've got a cheapo CB swr meter which I thought might be suitable for
> >> some HF QRP work.  Problem is that it is very insensitive on the HF
> >> freqs.  Can't even get more than about 20% of the scale with 5 watts
> >> on 40 meters.
>
> > I've used those cheapo CB SWR meters, too, and yes at low HF they are
> > not so sensitive even with the sensitivity turne as high as it can go.
>
> > What is more important is the meter reading on "reflected" compared to
> > "forward". As long as the reflected is much lower (roughly 1/4 or less)
> > than forward, you should be OK. Most scales I've seen will have a
> > calibration such that reflected at about half the scale as forward means
> > an SWR of about three to one. One of my meters has this point at 2/3 of
> > full scale. I have always felt satisfied if I can get reflected down to
> > one tenth, or less, of forward by manipulating the antenna tuner.
>
> > If you want to be a purist, then you might also consider locating a more
> > sensitive meter, say 20-50 microamps DC and using that. Most of those
> > internal meters are 100-200 microamps DC. Or, make the modification you
> > describe below.
>
> >> It uses a stripline for pickup and I'm wondering if maybe I should
> >> replace that with a broadband toroid configuration.  Any specific
> >> recommendations? How about adding some gimmick capacitance across the
> >> stripline to increase coupling?
>
> > I'm not sure it is worth the work to try this, but I don't have a good
> > recommendation or preference to emphasize.
>
> >> TIA,
> >> Bill WX4A
>
> Well, this little dilly has several wattage ranges, calibrated at 27 MHz
> of course, as well as the 'adjust to full scale, flip to REV' for SWR

> readings.  I could not get anywhere near full scale with the setting.
>
> I did add some additional capacitance off of the stripline and am now
> within range of the thing.  It took about 10pf, a gimmick wasn't enough.
>   Celebrating that success I reset the lowest ranges of the wattmeter (5
> and 50 watts) to read accurately at 7 MHz.  I have no fantasies about
> the linearity of the circuit now nor any fantasy that the other ham
> bands will read anywhere even close wattage-wise but it seems just the
> ticket for 40 meters.
>
> If I get enthusiastic I might try a ferrite transformer and just see how
> much flatter that might be across the bands.
>
> 73,
> Bill

Operation of an SWR meter depends on monitoring the line current and line voltage in the proper ratio. If you simply add capacitance to increase the pickoff of voltage, you'll screw up the ratio and it won't come close to reading SWR correctly. If, on the other hand, you make a directional coupler with two identical toroid transformers, you should be able to get decent directionality as well as good flatness across the whole HF range. A coupled-line hybrid (directional coupler) has maximum response where the coupled section is 1/4 wave long (or 3/4, or other odd quarter), and the response drops off as you go to lower frequencies. Where the line is short compared with 1/4 wave, the response in volts is very nearly linear with frequency, so at 2.7MHz, your 27MHz coupler will most likely have about 1/10 the voltage response (1/100 the power response) as at 27MHz. A transformer coupler can be flat within a dB over more than a 10:1 frequency range, but it is important to use the right permeability ferrite in the design. You do not want too much inductance--imperfect coupling between primary and secondary causes a rolloff at high frequencies--higher inductance means higher leakage inductance for given coupling, and that in turn means rolloff at lower frequency.

Cheers,
Tom

# 1926. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 00:56:42 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <d8640c6a-9917-45ca-8f8e-80eaefa49b92@z27g2000prd.googlegroups.com>
Source record: 3913

On Nov 23, 10:07 am, highlandham <rfbu...@nospam.com> wrote:
> > In the 78 issue there is one as you describe.  The broadband torroid sensors
> > are about standard in the autotuners and in some radios because they tune up
> > at low power.  They are small and don't add much inductance.  You might even
> > build it into a qrp rig and use a multi function meter scrapped out of an
> > old tape recorder or a led bar graph.
>
> ================================
> High intensity LEDs (for example those as used in traffic lights ,225 ea
> per light) already light-up at 45 microampere and hence can be directly
> used as a reflected power indicator instead of a meter.
>
> Frank   KN6WH

Cool idea, Frank! Should work fine at low frequencies, but beware
that the junction capacitance of high power LEDs can be pretty high so
they likely wouldn't be great at higher frequencies. I just measured
some low power ones a few days ago at about 20pF, which is about 265
ohms reactance at 30MHz, not bad at all, but wouldn't be so good at
450MHz.

Cheers,
Tom

# 1927. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 01:22:54 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <b295f900-2dde-430b-9989-3770daef108e@r37g2000prr.googlegroups.com>
Source record: 3914

On Nov 21, 8:24 pm, "NoSPAM" <unkn...@nospam.org> wrote:
> "exray" <radioex...@geeemail.com> wrote in message
>
> news:gg7qs402stp@news1.newsguy.com...
>
> > In terms of old transmitters from the 20s/30s...In a crystal oscillator I
> > understand the concept of setting the oscillator output tank to favor the
> > harmonic from the crystal. (Stop me if I'm wrong already...)
>
> > But in a doubling amplifier stage am I counting on having enough harmonic
> > content at the input or am I creating the harmonic with the non-linearity
> > of the amplifier?
>
> > TIA
> > -Bill WX4A
>
> Hi Bill.
>
> Remember that single ended frequency multiplier stages are usually operated
> in Class-C where the nonlinear operation of the stage produces the
> harmonics. In a Class-C stage, the grid (of the tube since we are talking
> about vintage transmitters) is biased such that the plate current only flows
> in short pulses. The narrower the pulse width, the greater the harmonic
> generation of the stage. If you look in the old RCA Transmitting Tube
> Manual, there is a design procedure where the "conduction angle" of the tube
> is chosen for proper harmonic generation.
>
> Frequency doubling is unique in that two Class-B stages may be used in a
> push-push arrangement. Here the grids are driven in push-pull while the
> plates are connected together in parallel. The resulting waveform will
> essentially be the equivalent of full-wave rectification of the input
> signal. Without going into Fourier series, the resultant waveform only
> contains even harmonics of the input signal while the fundamental driving
> frequency is cancelled out.
>
> Fortunately I was already a ham operator when my high school math class
> taught Fourier series *. I immediately saw the practical value of this
> mathematical concept and it made good sense to me. Your question is a good
> one and reading some of the tutorials on Fourier series (do a Google search)
> will be very useful to your understanding of harmonic generation and
> intermodulation distortion. I hope that my simple explanation will start
> you in your own exploration.
>
> 73, Barry L. Ornitz WA4VZQ

>
> * More years ago that I care to admit!  :-)

Wow, there's a name I haven't seen for a while. I must be frequenting
the wrong groups. I was just thinking about you a couple days ago.
Hi Barry!

More about what Barry wrote: in the limit as the conduction angle
goes to zero and you generate a very narrow pulse of current, the
harmonics end up all the same amplitude. That's for an impulse of
zero width. Unfortunately, given limited amplitude of the current in
that very narrow pulse, the total energy becomes small. As you widen
the pulse, you'll see that the "comb" of harmonics no longer has
constant amplitude, but the amplitudes as you go up the "comb" (higher
in frequency)drop, and there will be a frequency at which they go to
zero, and then increase again (and go to zero again, and increase
again). The magnitudes follow a sin(x)/x shape, for perfectly
rectangular pulses. This becomes interesting for a the design of
frequency multiplier stages: if for example you want to get x4 out of
a stage you better NOT run it at a conduction angle that results in
nulling of the fourth harmonic! I think I was bit by this a time or
two in my youth when I didn't understand this. (I'm working on
something right now where I want that comb of harmonics to be all very
nearly equal amplitude up to about 100MHz, and that tells me how
narrow the pulse must be.)

Cheers,
Tom

# 1928. Re: Danby Mirowave Oven = lousy faraday cage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 01:56:04 UTC
From: RFI-EMI-GUY <Rhyolite@NETTALLY.COM>
Message-ID: <492a09a4$0$17057$9a6e19ea@unlimited.newshosting.com>
Source record: 3915

Alan Cruikshank wrote:
> I have a Motorola Cordless Phone model SD4551, and a Danby Mirowave oven
> model DMW902W(-1). I tried putting the cordless handset into the closed
> microwave and sucessfully paged it. Should I be worried?
>
>

Next time you try this, put the oven in defrost mode for about 30
seconds. The "problem" should resolve itself. };^}

Your Motorola phone is 2.4 GHz model the results are interesting, but
not conclusive since the seal is probably only effective for some 10's
of dB's and your phone system has an effective path loss of perhaps 100 dB.

--
Joe Leikhim K4SAT
"The RFI-EMI-GUY"ï¿½

"Treason doth never prosper: what's the reason?
For if it prosper, none dare call it treason."

"Follow The Money" ;-P

## 1929. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 03:26:58 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <1ca64c73-7e41-4dd7-9149-f2f433df4422@w35g2000yqm.googlegroups.com>
Source record: 3916
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Nov 23, 7:39 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 23 Nov 2008 15:32:02 -0800, Jeff Liebermann <je...@cruzio.com>
> wrote:
>
> >NEC2 model:
> ><http://802.11junk.com/jeffl/antennas/AMOS-7/>
> ><http://802.11junk.com/jeffl/antennas/AMOS-5/>  (not optimized yet)
>
> Fixed.  I was feeling guilty so I ran it through the optimizer in
> 4NEC2.  I haven't built a 5 dipole AMOS yet using these dimensions.
>
> --
> Jeff Liebermann     je...@cruzio.com
> 150 Felker St #D    http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann     AE6KS    831-336-2558

I put one up I use with a WiFi repeater and I can see dozens of
wirless routers in my neighborhood. The antena i mounted at about
20ft on my chimney. There are about 8 or 9 with no security. If I so
chose I would never have to pay for internet service. There is another
subdivsion behind my house I havent even looked at that one yet.
Strange thing I know 3 of the people who have the open systems and
they are farly savy about these things. I wonder if they are leaving
them open on purpose.

Jimmie

# 1930. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 04:03:05 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <ada94159-5b79-4635-8b3f-caeccc0ac9d3@41g2000yqf.googlegroups.com>
Source record: 3917

On Nov 23, 7:56 pm, K7ITM <k7...@msn.com> wrote:
> On Nov 23, 10:07 am, highlandham <rfbu...@nospam.com> wrote:
>
> > > In the 78 issue there is one as you describe. The broadband torroid sensors
> > > are about standard in the autotuners and in some radios because they tune up
> > > at low power. They are small and don't add much inductance. You might even
> > > build it into a qrp rig and use a multi function meter scrapped out of an
> > > old tape recorder or a led bar graph.
>
> > ================================
> > High intensity LEDs (for example those as used in traffic lights ,225 ea
> > per light) already light-up at 45 microampere and hence can be directly
> > used as a reflected power indicator instead of a meter.
>
> > Frank KN6WH
>
> Cool idea, Frank! Should work fine at low frequencies, but beware
> that the junction capacitance of high power LEDs can be pretty high so
> they likely wouldn't be great at higher frequencies. I just measured
> some low power ones a few days ago at about 20pF, which is about 265
> ohms reactance at 30MHz, not bad at all, but wouldn't be so good at
> 450MHz.
>
> Cheers,
> Tom

I'm a looking at my tentec 1202 swr kit I a built. They usin' dual
stacked iron toroids just large enough ID to pass an inch long piece
of RG174 coax and 10 turns of 26 AWG enamel wire.

# 1931. Re: Danby Mirowave Oven = lousy faraday cage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 07:42:06 UTC
From: MarkAren <markaren10@yahoo.com>
Message-ID: <49fb9437-ba47-4099-8138-4357f4bfca08@r15g2000prh.googlegroups.com>
Source record: 3918

I would think 10mW-ish (+10dBm) leakage around the seal of an oven
would be reasonably safe, this is down from 1kW (+60dBm) output from
the magnetron.

50dB attenuation should have a marked impact on range for a cordless
phone.

Still all rather inconclusive, but maybe time to buy a leakage
detector just to be safe...

-Mark

On Nov 24, 2:56 pm, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
> Alan Cruikshank wrote:
> > I have a Motorola Cordless Phone model SD4551, and a Danby Mirowave oven
> > model DMW902W(-1). I tried putting the cordless handset into the closed
> > microwave and sucessfully paged it. Should I be worried?
>
> Next time you try this, put the oven in defrost mode for about 30
> seconds. The "problem" should resolve itself. };^}
>
> Your Motorola phone is 2.4 GHz model the results are interesting, but
> not conclusive since the seal is probably only effective for some 10's
> of dB's and your phone system has an effective path loss of perhaps 100 dB.
>
> --
> Joe Leikhim K4SAT
> "The RFI-EMI-GUY"©
>
> "Treason doth never prosper: what's the reason?
> For if it prosper, none dare call it treason."
>
> "Follow The Money"  ;-P

# 1932. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 11:00:50 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gge1h401v86@news7.newsguy.com>
Source record: 3919

raypsi wrote:

>
> I'm a looking at my tentec 1202 swr kit I a built. They usin' dual
> stacked iron toroids just large enough ID to pass an inch long piece
> of RG174 coax and 10 turns of 26 AWG enamel wire.

Thanks everybody, that seems to be the way to go.

73,
Bill - WX4A

## 1933. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 16:08:51 UTC
From: JB <nospam@goofball.net>
Message-ID: <nkAWk.557$us6.465@nwrddc01.gnilink.net>
Source record: 3920
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

"Wayne" <mygarbagecan@verizon.net> wrote in message
news:ggcr5n$3q1$1@news.motzarella.org...
>
> "JB" <nospam@goofball.net> wrote in message
> news:0aeWk.371$QX3.10@nwrddc02.gnilink.net...
> >> -
> >> I have need of a directional antenna for a 30 foot path within the
house.
> >> (the microwave oven wipes out the signal).
> >>
> > Yikes! I have never seen that. I would be concerned about leakage.
> > Sometimes I have torn into things and found stupid stuff like paint over
> > grounding surfaces or rust in the compartment. There is a critical
ground
> > around the probe entrance.
> >
> >
> The laptop computer is downstairs about 10 feet from the microwave, and
the
> wireless router is upstairs about 30 feet away with a desktop(and the path
> goes through three walls and the floor. The microwave doesn't wipe out
the
> laptop, but slows things down a bit. A directional antenna would solve
the
> problem. I'm not trying to increase range at all.
>
It would certainly be best to remove the interference. If you have 4 bars
now, 5 bars might not do away with the problem. Moving the microwave just
5' more might be enough. You may have to bite the bullet and put in some
wiring to move the router.

Some of these guys are prone to take a practical problem like yours and turn
it into a full-blown engineering problem or a swap meet for their break
through technology or even an opportunity to throw mud. One engineering
problem we faced was how to contain UHF security and housekeeping repeaters
to a high rise building and it's underground structure. The final result
was 99% coverage in the building and the parking structure, but when
security went off the property, the radios went away. Visits to other
buildings showed no coverage there either. We had to do that for both
security and so we could get co-ordinated for licensing in an urban area.
But it was a multi-million dollar system. This is free.

Placing one of those in an upstairs room is an invitation to the neighbors.
I run a combination of wired and wireless. Wired to the desktop and to a

port replicator for the laptop and wireless to a print server with several printers in a shop area, and the AP is off unless I want to roam around or do print jobs. There are times I have printed from the laptop, wireless in the shop to baby-sit print jobs, but it keeps the office clear and quiet. One of these days I will have to run a cat5 out to the shop. It is simply faster and more secure. The end result is my router, 1 foot off the floor with the power set to 50% to do all I need to do.

# 1934. testi-testi

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 16:26:24 UTC
From: Sakari Meyer <sakari@beloved.com>
Message-ID: <3drhk.189$Rh.145@ulogisk.com>
Source record: 3921

Olen jopa itse h&#65533;mm&#65533;stynyt siit&#65533; peittelem&#65533;tt&#65533;m&#65533;st&#65533; ydinalan panikoinnista, jota jo parhaillaan p&#65533;&#65533;llemme kaatuvat ydinekotuhot t&#65533;&#65533;ll&#65533; netiss&#65533; aiheuttaa. Oli tosiaan t&#65533;ys yll&#65533;ri miten SELKE&#65533;STI ydinlobbaajat lopulta alkoivat oivaltaa ydinalan syyksi nykymaailmamme jyr&#65533;&#65533;viin tuhoihin.

Mehil&#65533;istuhon massiivisuus n&#65533;ytt&#65533;&#65533; olevan kulminaatiopiste. Eli viel&#65533; viime vuona t&#65533;nne oli aika harvat kirjoittamassa, ett&#65533; ydinala tulee jatkossa tappamaan kaiki maailmamme mehil&#65533;ispopulaatiot. Toki silloin asiasta kirjoittelin. Mutta tajuavia oli prosenteissa. Nyt kun p&#65533;iv&#65533;st&#65533; toiseen k&#65533;y JUURI kuten olen esitt&#65533;nyt on jotain aniharvaa ydinpoliisia lukuunottamatta alkanut faktat upota. Jopa mehil&#65533;iskasvattajaliiton sain viimein tajuamaan, ett&#65533; ydintaposta on kyse. Aiemat ydinalan disinfot vaikenivat muutamissa p&#65533;iviss&#65533;. Hienoa, ett&#65533; reaali alkaa kinostamaan ja ly&#65533;m&#65533;&#65533;n massoina l&#65533;pi viime vuona viel&#65533; totaalivaikenevaan lehdist&#65533;&#65533;mme my&#65533;s. Ilmeisesti 90% mehil&#65533;iskato ja sit&#65533; seuraava 1/3 osan ruokakato alkaa n&#65533;ky&#65533; niin kiistatta. Ilmeisesti ydinhallintomme on menett&#65533;m&#65533;ss&#65533; peli&#65533; koko laajuudella luonnon tuhoamisensa tiell&#65533;. Koska TABU:ja on laajasti nyt lis&#65533;&#65533;:

A/Maailmanlaajuinen ilmoitettu niin sammakkoel&#65533;inten, kuin matelijoiden kuoleminen niinik&#65533;&#65533; maailmanlaajuisesti ydinp&#65533;&#65533;st&#65533;jen tritiumsadelammikkoihin on kylm&#65533;sti m&#65533;&#65533;r&#65533;tty vaiettavaksi 100%! Aika h&#65533;rski aihe, kuin sent&#65533;&#65533;n kansainv&#65533;lisesti todettiin faktaksi toki!

B/Maailman kaikki tunnetut havumets&#65533;t tulevat kuolemaan muutamissa l&#65533;hivuosissa. Japanista, Portugalista ja Siperiasta v&#65533;&#65533;j&#65533;&#65533;m&#65533;tt&#65533; 90% metsist&#65533;mme l&#65533;hivuosina tappavista millisist&#65533; m&#65533;ntyankeroisista on tehty l&#65533;yd&#65533;ksi&#65533; per&#65533;ti 40kertaa. Vain hetki en&#65533;&#65533; ja ydinteollisuuden s&#65533;&#65533;hk&#65533;lle ei jatkossa ole lainkaan puuta! Tarkoin on vaiettu, ett&#65533; Ven&#65533;j&#65533;n puukauppa takkuaa sik&#65533;l&#65533;isist&#65533; megamets&#65533;tuhol&#65533;hteist&#65533; jo. Aihe on SELKE&#65533;STI 60v k&#65533;ytt&#65533;harhoilleen suunnitelluille ydinlaitoksillemme suoraa kuolemaa! Mega TABU! Ilman muuta.

C/Kaspian kampamaneetit ajoivat Merentutkimuslaitoksen meri&#65533;mme kartoittamasta h&#65533;rskimm&#65533;n p&#65533;&#65533;lle ei edes kalastajia ulkomerillemme sallita raportoimaan maneetti-invaasioita. Kyseess&#65533; kun on se keskeisin kulminaatiopiste, jonka TVO:n ydinlauhdekumpuamiset tuottaa megatuhona. Raportointiin pestataan nyt silkkana sikailuna amat&#65533;&#65533;rijoukkoa muka tutkimaan levi&#65533; vaan. Ydinhallintomme t&#65533;rkyilee aiheessa niin, ettei mit&#65533;&#65533;n rajaa. Kampamaneettien tiedet&#65533;&#65533;n jo kautta maailman tukkineeen voimaloiden massiivivesikanavistot kuin korkki pullot. Ruotsissa tilanne on jo sellainen, ett&#65533; ydinvoimaloissaan on 80% pysyv&#65533;t varotehonalenemat. Pian -50%. Tai kuten Ven&#65533;j&#65533;ll&#65533; merilauhteesta ydinalalla on PAKKO luopua, koskei meren valtaisat jopa 7 800el&#65533;int&#65533;/m2 kokoiset tulevat kampamaneettikannat takaa en&#65533;&#65533; ikin&#65533; asiallista j&#65533;&#65533;hdytett&#65533; ydinvoimaloille.

Mega-TABU
aiheena my�s.

D/ Niin t�m� mehil�iskato johtuu tunnetusti ydinionisaation aiheuttamasta ionosf��rimuutoksen suunnistusharhauttamisesta. Joka siis eksytt�� muuten terveet mehil�iset pois muutoksillaan pois tutuilta pes�ns� paluureiteilt�. T�st� tabusta alkaa asiis puhti olemaan ydinalaltamme poissa, kun KAIKKI huomaa miten kato etenee. Aiemmin tekaistut virusvalheet eiv�t uppoa kansaan. Koska jopa mehil�iskasvattajat huomaavat, ett� suunistuksen ongelma ja ydinvoimalan l�heisyys ratkaisee suoraan mehil�isten h�vikin! Siksi massoittain TVO:n l�hist�lt� pelastetaan mehil�ispesi� turvaan ydinsaasteilta lt�-Suomeen. Jotkut yksinkertaiset ydinlobbarit erehtyy luulemaan n�in hetkeksi kasvaneista paikallismehil�ispopuloista, ett� kaiki ik��nkuin olisi kohdallaan, kuten enneen. Ei toki!(

E/ Ruotsissa on kaikien aikojen rajuimmat mets�palot 02.06.2008. Koko Etel�-Suomessa mets�palovaroitus. Tippaa ei vett� olla tuttuun tyyliin saatu oikeastaan sitten lumien. Kuka oikeasti yll�ttyi, ett� jo viime vuona viimein jopa EU:ssa my�nnetty -40% ydinaavikoituminen etenee varmasti tappaen yh� hurjemmin. Kuka en�� edes muistaa, miten mm. Portugali paloi kokonaan superkuivuuksiinsa. Tilanne jatkuu ja pahenee. Ranskassa my�s jo viime kes�n� mets�� kuivettui enemm�n kuin s�teilyll� pilattu ydinaavikkomaa kasvoi. T�m� vuosi on taas edellist� pahempi. Viel� koettaa toki Ilmatieteenlaitos ved�tt�� hiilidioksidilis��ntymisen synnyt�mine +30% sadantakasvuharhoineen. Pelkk� vilkaisu jo ennen varsinaista kes�� kuolevaan ja kuivettuvaan luontoomme kertoo disinfon ydinalan panikoinniksi. Virannomaistemme luotettavuus l�henee syyst� nollaa. Ydinala tappaa ja takuuvarmasti niin kauan, kunnest tuhoaa v�hint��n itsens�, kenties s�teilyp��st�ineen koko ihmiselon mahdollisuudet my�s. Ja mik� oleelista ydinalamme TARKOIN tiet�� mit� ydinkauhuja saamme jatkoon n�hd� s�teilyjen kirist�ess� el�misen mahdollisuuksia hetki hetki, hetkelt� kaikkialta ymp�rilt�mme!(( ((

PS. Kuten olemme huomanneet lehtien sivut yht �kki� t�yttyv�t virannomaisuhkailuista siit�, ettei nettiin saa jatkossa en�� kirjoittaa edes n�ist� mit� ymp�rill�mme tapahtuu? Tajuaako kansamme miksi? Koska ydinhallintomme tiet��, ett� jatkossa kyyti k�y niin hirve�ksi tulevine ydinp��st�jen punasadekausineen, ettei siit� saa antaa edes silminn�kij�lausuntoja en��! Tajjuatteko, homma on t�ysin poissa ydinalamme hallinnasta. Einsteinin varotukset alkavat saamaan lihaa rajusti luittensa ymp�rille. Yksi on tulevassa varma ydinala vetelee syyllisin� viimeisi��n!

# 1935. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 17:46:02 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rkoli4dv240dua688aajl5eqmf27sdlphj@4ax.com>
Source record: 3922
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Sun, 23 Nov 2008 19:26:58 -0800 (PST), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>On Nov 23, 7:39ï¿½pm, Jeff Liebermann <je...@cruzio.com> wrote:
>> On Sun, 23 Nov 2008 15:32:02 -0800, Jeff Liebermann <je...@cruzio.com>
>> wrote:
>>
>> >NEC2 model:
>> ><http://802.11junk.com/jeffl/antennas/AMOS-7/>
>> ><http://802.11junk.com/jeffl/antennas/AMOS-5/> ï¿½(not optimized yet)
>>
>> Fixed. ï¿½I was feeling guilty so I ran it through the optimizer in
>> 4NEC2. ï¿½I haven't built a 5 dipole AMOS yet using these dimensions.

>I put one up I use with a WiFi repeater and I can see dozens of
>wirless routers in my neighborhood. The antena i mounted at about
>20ft on my chimney. There are about 8 or 9 with no security. If I so
>chose I would never have to pay for internet service. There is another
>subdivsion behind my house I havent even looked at that one yet.

If stealing internet service from the neighbors is your intended
purpose, you selected the wrong type of antenna. A sector antenna may
be a great idea for running a WISP or central access point, where
you're never sure of the direction the client radios are coming from.
It's a bad idea for use at the client end. The idea is to pickup as
little interference as possible. You're reception of 9 stations is a
problem as any one of these could provide sufficient interference to
make your pirated internet connection useless. I suggest you look
into a panel or dish antenna, which will provide a much narrower
horizontal beamwidth, with the added bonus of more antenna gain.

>Strange thing I know 3 of the people who have the open systems and
>they are farly savy about these things. I wonder if they are leaving
>them open on purpose.

I was running an open access point at my office for a while. However,
I was also monitoring connection attempts and traffic. I figured that
nobody would bother. Wrong. I had some bum in a pickup truck and
camper, connect regularly to make VoIP phone calls. I had no problem
with him using the system and we eventually came to an arrangement.
However, he stupidly told all his friends, who immediately abused the
system, so I locked it up with a WPA password.

In another incident, one of my customers was in a hotel that wanted
real money to use their Wi-Fi. (This was about 6 years ago, before

the widespread proliferation of free Wi-Fi service). So, he connected to a random open access point. The security on his laptop was more than a little lacking (writable shared folders), resulting in the installation of multiple trojan horses, spam bots, etc. I suspect the open access point was an intentional trap set for hotel visitors.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 1936. Re: Question about unwanted VFO pulling during transmit

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 17:52:40 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <dpydnUZ5G_dKdLfUnZ2dnUVZ_uudnZ2d@web-ster.com>
Source record: 3923

Tim Shoppa wrote:
> On Nov 18, 5:21 pm, Kendal Goodson <kend...@yahoo.com> wrote:
>> On Nov 18, 1:19 pm, exray <radioex...@geeemail.com> wrote:
>>
>>
>>
>>
>>
>>> Kendal Goodson wrote:
>>>> Thanks Grumpy. I'll check supply voltage next. It's not a thermal
>>>> problem. The output is nice and stable until key down when it pulls.
>>>> It's also frequency stable during keydown, just on a different
>>>> frequency. The oscillator isn't keyed, so I don't think it's an
>>>> oscillator startup issue.
>>>> 73,
>>>> Kenn
>>> I'm missing something. You said that the 'driver' etc were disconnected
>>> and the osc is not being keyed.
>>> So what is actually being keyed?
>>> -Bill
>> I see I've done a poor job of writing up the problem statement. The
>> VFO at ~3.050 feeds a SA612 whose internal oscillator runs at 4.0 Mhz
>> and mixes the two to come up with ~7.050Mhz. Output from the mixer
>> goes through a tuned bandpass filter to a class A driver and then to a
>> class C final. When I found I had a problem with the VFO staying on
>> frequency during transmit, I disconnected the driver stage and
>> replaced it with a resistor termination. The problem stayed
>> consistent. The SA612 and the buffer/driver stage are both keyed.
>
> Ahah! The SA612's input impedance will change by a lot when it is
> keyed up vs keyed down.
>
> Two ways to get around this:
>
> 1. Additional buffering between the VFO and SA612
>
> 2. Swamp the impedance change from power up to power down by adding
> some parallel resistance. Should be DC-isolated from the SA612's input
> because otherwise you will upset the balance.
>
> Solution #1 requires some additional parts and current drain. I really
> like the two-transistor W7EL buffer.
>
> Solution #2 is just a capacitor and a resistor, but also assumes that

> the VFO has enough drive that it won't object to being swamped.
>
> Tim N3QE

That sounds like it's the problem, and those are the solutions I'd
suggest -- Tim just got there first.

Do check the supply voltages to the VFO while you're at it, though --
changing VFO (and buffer stage) supply voltages will also pull the VFO
frequency.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 1937. Woman in Burlington Wisconsin

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 18:01:06 UTC
From: tyreemand@gmail.com
Message-ID: <66cf4719-e91c-464a-928c-8ddb6ac7c6c2@v42g2000yqv.googlegroups.com>
Source record: 3924
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://vorsex.blogbugs.org/

## 1938. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 18:44:27 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <s8sli4hk9nv2elc4e6o8ifka56a5rphsf1@4ax.com>
Source record: 3925
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

rec.radio.amateur.homebrew,alt.internet.wireless added back to the
distribution line.

On Mon, 24 Nov 2008 10:03:32 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>Jeff Liebermann wrote:
>> If stealing internet service from the neighbors is your intended
>> purpose, you selected the wrong type of antenna. ...
>
>I'd say stealing is bit strong, I run an open wireless access point
>here, its' SSID is "WelcomeAboard!"

My home system is "1540 Jackson Ave" which is my address. The
assumption is that someone wanting to use my system can bang on the
door and ask permission. My office SSID uses the company name.

>I think that "wrong type" (referring to OMNI, apparently) of antenna is
>perfect, given there are a few access points within range.

I'll stand by my statement. Unless you're running a mesh network, an
omni at the client end is a bad idea. The client knows the direction
of the desired access point and should use a directional antenna to
minimize interference. In my limited experience (I ran a small WISP
and neighborhood LAN/WLAN for a few years) interference is the most
serious impediment to reliable operation. The more you can do to NOT
hear the undesired stations, the more reliable the connection.

>You can
>"bridge" multiple access points for better throughput ...

Sorta. You can do route switching easily enough, but load balancing
between multiple internet connections can't be done without IP
bonding, which requires everyone's cooperation (including the ISP's).
The problem is that you can't use multiple ISP's to improve the
download speed from a single connection. For example, if you want to
download a large file, it will only go as fast as the speed of the
fastest ISP connection. The other WAN interfaces remain comatose
because there's no way to bond the single destination IP to two
different download streams and routes. You can download something
else using the 2nd WAN interface, but you can't use it to increase the
speed of the first. Uploading has a similar limitation, where you
can't improve the speed to a single connection. Where such routers
work best is if there is a LAN full of users sharing multiple WAN
connections, not for a single user looking for "better throughput..."

I've used a few of these with moderate success:
<http://www.edimax.com/en/produce_list.php?pl1_id=3&pl2_id=>
(See load balancing and multi-homing routers near bottom of page).

Incidentally, multiple cient radios, run to a passive combiner in a single omni antenna is a total loser. The FCC specifically proscribes synchronizing wi-fi radios. Even if the isolation can be increased sufficiently to prevent receiver overload, it's highly probable that a receive packet will arrive exactly when some other client radio goes into transmit. Some relief can be obtained by using different non-overlapping channels (1, 6, 11), but only with expensive bandpass cavity filters. The spread spectrum spreads quite nicely into the spectrum of the adjacent radio.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 1939. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 19:21:32 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <87f4375f-e3b4-460c-95ce-2d3e55a29dce@j35g2000yqh.googlegroups.com>
Source record: 3926

On Nov 21, 9:30 pm, exray <radioex...@geeemail.com> wrote:
> This is a really dumb question but it dawned on me that I did not know
> the correct answer.
>
> In terms of old transmitters from the 20s/30s...In a crystal oscillator
>  I understand the concept of setting the oscillator output tank to
> favor the harmonic from the crystal. (Stop me if I'm wrong already...)

You're right on the trail. Most oscillator circuits are operating deep in class C. The exceptions are called "marginal, doesn't always start" oscillators :-).

Some oscillators make the crystal operate on an overtone. An overtone is often very very close to a harmonic. In this case the LC tank chooses the overtone where gain is going to be greater than one. Overtones close to odd harmonics are usually much more active in the crystal.

Other oscillators make the crystal operate on the fundamental, and the output picks off the harmonic. This is where the electron coupled oscillator shines.

It's possible to have the crystal operate on the overtone, and then electron-couple to pick a harmonic of the overtone. You see this in some 40's/50's/60's era VHF projects.

> But in a doubling amplifier stage am I counting on having enough
> harmonic content at the input or am I creating the harmonic with the
> non-linearity of the amplifier?

Mostly creating. It doesn't hurt if there's some harmonic content at the input. Again, for efficiency most of the power stages will be in class C already, and if they need to multiply in a non-power stage they'll set it up to make a lot of harmonics.

Individual stages are sometimes configured in push-pull to favor odd harmonics over even ones, or are biased to be favorable for the desired harmonic.

Tim.

# 1940. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 21:00:20 UTC
From: cmdr buzz corey <cmdr-buzz-corey@mailcity.com>
Message-ID: <10048f70-225e-4ba3-acee-632151f1ac30@z28g2000prd.googlegroups.com>
Source record: 3927
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Nov 14, 5:13 am, Telstar Electronics <briangrif...@sbcglobal.net>
wrote:
> The VoiceMax speech processor is not for everyone...
> It's only for radio operators that want maximum range from their rig.

Along with maximum splatter.

## 1941. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 22:31:16 UTC
From: Bill Kearney <wkearney99@hotmail.com>
Message-ID: <vo2dnUEGm7DNtrbUnZ2dnUVZ_qrinZ2d@speakeasy.net>
Source record: 3928
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> I suspect the open access point was an intentional trap set for hotel
> visitors.

Great way to collect accounts and passwords, sit outside a coffee shop with
some gear and you're set.

## 1942. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 22:32:40 UTC
From: Bill Kearney <wkearney99@hotmail.com>
Message-ID: <-bOdncgMCo4WtrbUnZ2dnUVZ_sWdnZ2d@speakeasy.net>
Source record: 3929
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> My home system is "1540 Jackson Ave" which is my address. The
> assumption is that someone wanting to use my system can bang on the
> door and ask permission. My office SSID uses the company name.

Which raises the question, if someone uses your access point without permission are you within your rights to do whatever you please with the packets (and their contents) you detect?

Seems fair, steal my airwaves and I'll steal your data in return.

## 1943. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-24 23:47:04 UTC
From: dplatt@radagast.org
Message-ID: <o0rrv5-4lp.ln1@radagast.org>
Source record: 3931
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

In article <-bOdncgMCo4WtrbUnZ2dnUVZ_sWdnZ2d@speakeasy.net>,
Bill Kearney <wkearney99@hotmail.com> wrote:

>> My home system is "1540 Jackson Ave" which is my address. The
>> assumption is that someone wanting to use my system can bang on the
>> door and ask permission. My office SSID uses the company name.
>
>Which raises the question, if someone uses your access point without
>permission are you within your rights to do whatever you please with the
>packets (and their contents) you detect?
>
>Seems fair, steal my airwaves and I'll steal your data in return.

As far as the FCC is concerned, I suspect that the usual "third party reception" rules would apply. If the communication is transmitted over the airwaves but is not intended for you, you're permitted to intercept the communication but *not* to make gainful personal use of what you overhear.

There was one company which tried to prosecute some local "wardrivers" who had publicized the fact that the company was running an open wireless network. The FCC not only refused to pursue their complaint (pointing out that the company had created the problem and failed to mitigate it by turning on WEP), but cited the company for running an illegal Part 15 network (they were using external high-power amplifiers on their APs).

I'm reasonably sure that any criminal actions you implement with the use of such data (e.g. making any unauthorized access to a protected computer system, etc.) would *NOT* seen as legitimate by The Powers That Be, even if you gained knowledge of that data by scarfing it off of your own access point during an unauthorized use thereof.

As I understand it, there isn't any standard interpretation (even in under U.S. laws) as to what rights-of-usage apply to an open access point, in the absence of a statement by the AP's owner as to what the rules are. The FCC doesn't appear to consider this aspect of the wireless problem to be part of their jurisdiction.

I believe that in some areas, using such an AP without having received some explicit form of permission is considered to be a tort (a civil wrong) and the owner could file suit against you. Using the AP to break into a computer network (e.g. accessing files, etc.) could easily qualify as a prosecutable "computer crime".

I've read that some municipalities have passed a rule which says that the act of setting up an insecure access point, and broadcasting beacons "to the wind", counts as something akin to an open invitation... enough so that the use of the AP without explicit permission isn't considered a crime, or (I think) even a tort. This might especially be true in the case of those APs/routers which come with a WEP password pre-installed (the 2Wire models are one example) and in which the owner must explicitly disable the security feature if s/he decides that this is appropriate.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

## 1944. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 00:02:51 UTC
From: JB <nospam@goofball.net>
Message-ID: <LgHWk.705$QX3.9@nwrddc02.gnilink.net>
Source record: 3930
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> >I'd say stealing is bit strong, I run an open wireless access point
> >here, its' SSID is "WelcomeAboard!"
>
> My home system is "1540 Jackson Ave" which is my address. The
> assumption is that someone wanting to use my system can bang on the
> door and ask permission. My office SSID uses the company name.

LMAO! My SSID is the same as my front gate Password. That way I never have to worry about opening it when I get home from work and the party is always in full swing when I get there! It's a little bit bothersome when dead bodies turn up in the moat though!

# 1945. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 01:28:54 UTC
From: an old friend <kb9rqz@yahoo.com>
Message-ID: <98a62611-fb5f-45f0-8042-af5191d51bf3@d32g2000yqe.googlegroups.com>
Source record: 3932
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Nov 24, 4:00 pm, cmdr buzz corey <cmdr-buzz-co...@mailcity.com>
wrote:
> On Nov 14, 5:13 am, Telstar Electronics <briangrif...@sbcglobal.net>
> wrote:
>
> > The VoiceMax speech processor is not for everyone...
> > It's only for radio operators that want maximum range from their rig.
>
> Along with maximum splatter.

at least he has a name and the guts to use it

# 1946. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 02:28:13 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <XIJWk.68288$kh2.47919@bignews3.bellsouth.net>
Source record: 3933

Grumpy The Mule wrote:
> Howdy,
>
> I've managed several labs where we had dozens of WTCP stations
> in daily use.
>
> The only problem I found with WTCP is the connector between the
> base and the cord. I usually remove the connector and hardwire
> the cord at the base. It causes the intermittent operation that
> you've decribed.
>
> I couldn't agree with you more concerning the damage Cooper
> did to the Weller brand. Since they moved production to Mexico
> the quality control is nonexistant. Some of the design changes
> which I believe were intended as cost reductions were ill advised
> too. The old Weller soldering guns are indestructable.
>
> At home I have a Pace soldering/desoldering station and a Metcal
> SMT station. I've no complaints other than the price.
>
> At work we have a Hakko soldering/deslodering station and it's a
> real work horse. We also have a Metcal SMT station which is a bit
> fussy but it has been though hell and back. We just bought a couple
> Pace ST70 soldering stations for general purpose work. I think we will
> buy a few more, they're great.
>
> It's too bad that Wahl quit selling Sterling soldering irons in
> the US. It's an odd little iron but I love it. Thirty years old
> and it's still the first iron I reach for in my shop. The original
> tip is perfect! I called Wahl about buying a second iron and no one
> there knew what I was talking about. The most clever feature is an
> aluminum washer between the tip and body of the iron. The difference
> in coefficient of expansion keeps the tip from seizing. It says made
> in England on the body. Google was no help... sigh.
>
>
> 73,
> Grumpy
>
I remember the Wahl 'iso tip' battery irons. Nice portable tool for
field repairs (but useless for field day PL-259 assembly!). Only
problems were battery and tip replacement. The tips would eventually
fall apart as the ceramic insulation surrounding the heating element
cracked.

As for field day, once I figured out how to quickly assemble PL259's
onto RG8U, I got drafted by the radio club to handle this duty at field
day. (Strip back about 4" of outer insulation, tin the braid with a HOT
soldering gun (I used the BIG Weller gun), file down the excess solder,
cut down the braid with a tubing cuter or a razer saw, remove the center
insulation, cut the center conductor to size and tin it, then slip the
coupling ring over the coax and screw on the connector, then solder it
home (with the BIG Weller gun again!). Took about 4 minutes per connector.

>
> ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in
> news:EPJTk.66346$Ep1.55496@bignews2.bellsouth.net:
>
>>> Tim N3QE
>> I went through two WTCP's. They worked ok, but eventually got
>> intermittent and would not stay hot. I now have a WES51/PES51 setup.
>> No more changing tips to change temperature, just dial it in. No led
>> display, but the dial is calibrated close enough. Also the soldering
>> pencil is lighter and less bulky than the WTCP was. Still I did like
>> the WTCP's all in one construction over the two piece (power supply and
>> iron stand) of the 'ES51. The Coper group has destroyed Weller. I
>> collect old Weller guns whenever I find them, the new ones SUCK.
>>
>

# 1947. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 06:03:28 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <mj4ni4la1f6bljnn1tkgi8okah20g75dp7@4ax.com>
Source record: 3934
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Mon, 24 Nov 2008 17:32:40 -0500, "Bill Kearney"
<wkearney99@hotmail.com> wrote:

>> My home system is "1540 Jackson Ave" which is my address. The
>> assumption is that someone wanting to use my system can bang on the
>> door and ask permission. My office SSID uses the company name.

>Which raises the question, if someone uses your access point without
>permission are you within your rights to do whatever you please with the
>packets (and their contents) you detect?
>
>Seems fair, steal my airwaves and I'll steal your data in return.

Nope. Two wrongs don't make a right. You'll also find that "an eye
for an eye" and retailiation are not actionable in the USA legal
system. Simply having your rights violated, does not magically make
it open season on the perpetrator. The courts are expected to deal
out the necessary justice, not you. For example, catching a burglar
in the act does not give you the right to pound him into the ground.
You can and probably will be charged with battery for doing that.

I have some experience and opinions with Wi-Fi related crimes and
enforcement, but I don't wanna start yet another political discussion.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 1948. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 06:48:27 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B6183B9A8422MDWN@194.177.96.78>
Source record: 3935

Howdy,

I kept the iso-tip iron in my briefcase. It heats fast
and I don't regret having bought it. When the batteries
went bad I no longer had a use for it. So it ended up
somewhere... can't remember where. The ceramic fell out
of the tips on me too. I think the engineers at Wahl
should have talked to someone at Cotronics.

I got tired of tightening the tips on the guns and bought
an 80W "pencil." A studly iron, suitable for soldering
sheets of copper and bus bars. For me the next step up
from this is a torch. It's only 80W so at first blush
I expected a higher wattage gun to work better but there's
a lot more thermal mass in the iron. The copper tip is
a slug about 1/2" dia and 1-1/4" lg. It makes fast work
of PL259's.

I like the tubing cutter technique if the coax has enough
braid. Some of the junky stuff I just flood the connector
with solder through the connector's holes and mostly it
works. I've tried wrapping the scant braid with fine wire
first which may help. Buying or scrounging good quality
coax with decent braid coverage is the best answer.

I thought the crimper for PL259's (on RG8 size coax) was
a great idea but after reading some reviews and looking
at the photos of cracks in the connector I'm not so sure.
I thought of buying a set of dies and fixing them to a
hefty arbor press I have in the garage. Though soldering
has proved reliable and I like reliable.

73,
Grumpy

ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in
news:XlJWk.68288$kh2.47919@bignews3.bellsouth.net:

> I remember the Wahl 'iso tip' battery irons. Nice portable tool for
> field repairs (but useless for field day PL-259 assembly!). Only
> problems were battery and tip replacement. The tips would eventually
> fall apart as the ceramic insulation surrounding the heating element
> cracked.
>
> As for field day, once I figured out how to quickly assemble PL259's
> onto RG8U, I got drafted by the radio club to handle this duty at

> field day. (Strip back about 4" of outer insulation, tin the braid
> with a HOT soldering gun (I used the BIG Weller gun), file down the
> excess solder, cut down the braid with a tubing cuter or a razer saw,
> remove the center insulation, cut the center conductor to size and tin
> it, then slip the coupling ring over the coax and screw on the
> connector, then solder it home (with the BIG Weller gun again!). Took
> about 4 minutes per connector.

# 1949. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 07:29:27 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <YsWdndfLC_jINLbUnZ2dnUVZ_hGdnZ2d@giganews.com>
Source record: 3936

cmdr buzz corey wrote:
> On Nov 14, 5:13 am, Telstar Electronics wrote:
>> The VoiceMax speech processor is not for everyone...
>> It's only for radio operators that want maximum range from their rig.
>
> Along with maximum splatter.

In looking closely at his photos, it appears his circuit is based on the Analog Devices SSM2166 (product data: http://tinyurl.com/6eadpn). The specifications indicate it *can* be operated cleanly. Of course, to set it up requires at least an oscilloscope... which many hams don't own (or know how to use).

Based on the photos I've seen, I wouldn't buy one because of the poor soldering:
http://img105.imagevenue.com/img.php?image=97441_VoiceMax_122_173lo.jpg.
I'll just continue to use my 2-tube (2x 3-500Z) speech "processor":
http://www.rigpix.com/linears/sb220.htm

Bryan WA7PRC

## 1950. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 12:32:00 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <v8SWk.69060$De7.37534@bignews7.bellsouth.net>
Source record: 3937
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:mj4ni4la1f6bljnn1tkgi8okah20g75dp7@4ax.com...
> On Mon, 24 Nov 2008 17:32:40 -0500, "Bill Kearney"
> <wkearney99@hotmail.com> wrote:
>
>>> My home system is "1540 Jackson Ave" which is my address. The
>>> assumption is that someone wanting to use my system can bang on the
>>> door and ask permission. My office SSID uses the company name.
>
>>Which raises the question, if someone uses your access point without
>>permission are you within your rights to do whatever you please with the
>>packets (and their contents) you detect?
>>
>>Seems fair, steal my airwaves and I'll steal your data in return.
>
> Nope. Two wrongs don't make a right. You'll also find that "an eye
> for an eye" and retailiation are not actionable in the USA legal
> system. Simply having your rights violated, does not magically make
> it open season on the perpetrator. The courts are expected to deal
> out the necessary justice, not you. For example, catching a burglar
> in the act does not give you the right to pound him into the ground.
> You can and probably will be charged with battery for doing that.
>
> I have some experience and opinions with Wi-Fi related crimes and
> enforcement, but I don't wanna start yet another political discussion.

---

Just like feces and politicians, politics is a fact of life.

Where's my coffee...? <G>

Ed, N2ECW

## 1951. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 17:08:49 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <bcf8391a-d084-42b1-9169-bfdf1ea7a167@k36g2000yqe.googlegroups.com>
Source record: 3938
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Nov 24, 12:46 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 23 Nov 2008 19:26:58 -0800 (PST), JIMMIE
>
>
>
>
>
> <JIMMIEDEE...@YAHOO.COM> wrote:
> >On Nov 23, 7:39 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> >> On Sun, 23 Nov 2008 15:32:02 -0800, Jeff Liebermann <je...@cruzio.com>
> >> wrote:
>
> >> >NEC2 model:
> >> ><http://802.11junk.com/jeffl/antennas/AMOS-7/>
> >> ><http://802.11junk.com/jeffl/antennas/AMOS-5/>  (not optimized yet)
>
> >> Fixed.  I was feeling guilty so I ran it through the optimizer in
> >> 4NEC2.  I haven't built a 5 dipole AMOS yet using these dimensions.
> >I put one up I use with a WiFi repeater and I can see dozens of
> >wirless routers in my neighborhood.  The antena i mounted at about
> >20ft on my chimney. There are about 8 or 9 with no security. If I so
> >chose I would never have to pay for internet service. There is another
> >subdivsion behind my house I havent even looked at that one yet.
>
> If stealing internet service from the neighbors is your intended
> purpose, you selected the wrong type of antenna.  A sector antenna may
> be a great idea for running a WISP or central access point, where
> you're never sure of the direction the client radios are coming from.
> It's a bad idea for use at the client end.  The idea is to pickup as
> little interference as possible.  You're reception of 9 stations is a
> problem as any one of these could provide sufficient interference to
> make your pirated internet connection useless.   I suggest you look
> into a panel or dish antenna, which will provide a much narrower
> horizontal beamwidth, with the added bonus of more antenna gain.
>
> >Strange thing I know 3 of the people who have the open systems and
> >they are  farly savy about these things. I wonder if they are leaving
> >them open on purpose.
>
> I was running an open access point at my office for a while.  However,
> I was also monitoring connection attempts and traffic.  I figured that
> nobody would bother.  Wrong.  I had some bum in a pickup truck and
> camper, connect regularly to make VoIP phone calls.  I had no problem

> with him using the system and we eventually came to an arrangement.
> However, he stupidly told all his friends, who immediately abused the
> system, so I locked it up with a WPA password.
>
> In another incident, one of my customers was in a hotel that wanted
> real money to use their Wi-Fi.  (This was about 6 years ago, before
> the widespread proliferation of free Wi-Fi service).  So, he connected
> to a random open access point.  The security on his laptop was more
> than a little lacking (writable shared folders), resulting in the
> installation of multiple trojan horses, spam bots, etc.  I suspect the
> open access point was an intentional trap set for hotel visitors.
>
> --
> Jeff Liebermann     je...@cruzio.com
> 150 Felker St #D    http://www.LearnByDestroying.com
> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann     AE6KS    831-336-2558- Hide quoted text -
>
> - Show quoted text -

I dont steal internet service but I do have an arrangement with a
couple of my neighbors so we can use each other service.
This has come in handy a couple of time now in just the last few
months when my cable went out and another neighbors cable modem went
out.
Its also a ton of fun just to build the antennas and be able to do it.

I must confess I have tapped in to a few unsecure home APs to check my
email while traveling. These are often easier to find than a hotspot.

Jimmie

# 1952. Re: weller EC2002C soldering station

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 17:51:51 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <elWdnYK1o5WnprHUnZ2dnUVZ8vydnZ2d@pipex.net>
Source record: 3939

> I thought the crimper for PL259's (on RG8 size coax) was
> a great idea but after reading some reviews and looking
> at the photos of cracks in the connector I'm not so sure.
> I thought of buying a set of dies and fixing them to a
> hefty arbor press I have in the garage. Though soldering
> has proved reliable and I like reliable.
==========
Perhaps it is useful to mention PL259 connectors with a braid fixing
arrangement identical to the one of an N-connector .
That leaves the tech to only solder the centre pin.
They are more expensive (abt US$4.50 ea) but imho it's worth the
expenditure.

Frank KN6WH

# 1953. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 20:41:46 UTC
From: seaweedsl <seaweedsteve@gmail.com>
Message-ID: <f18ee327-fbd3-4e0b-9810-c36001b94a3a@e1g2000pra.googlegroups.com>
Source record: 3940
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Nov 21, 1:38 am, DaveC <m...@bogusdomain.net> wrote:
> Looking for outdoor omni "whip" antenna for 2.4 GHz.
>
> Is there any reason to not go for the greatest gain antenna, given that cost
> is not too important (within reason)?
>
> There are scads of these on the 'net. I'm looking for someone who has
> experience with one or more of them and can make a recommendation for one.

Higher gain omni has flatter /narrower beam. So it has to be pointed
more accurately, tilting as needed to connect with desired AP.

As Jeff says, there's no reason to use an omni for a client. Get a
much cheaper directional antenna and you will get more gain with less
interference. Pointing will be easier too.

Take a look at the pattern for this one:
http://pnt.zoovy.com/product/MD24-12/12dBi_24GHz_Mini_Directional_Antenna.html

Or consider a combination weatherproof box with built in panel antenna
like this: http://tinyurl.com/5kfd42
(Choose the version that has the pigtail you need)

That's the first thing you want to determine, by the way, how much
gain is needed? Another thread....

Steve

# 1954. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-25 20:42:03 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gghnuv018i9@news3.newsguy.com>
Source record: 3941
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

JIMMIE wrote:

> I dont steal internet service but I do have an arrangement with a
> couple of my neighbors so we can use each other service.
> This has come in handy a couple of time now in just the last few
> months when my cable went out and another neighbors cable modem went
> out.
> Its also a ton of fun just to build the antennas and be able to do it.
>
> I must confess I have tapped in to a few unsecure home APs to check my
> email while traveling. These are often easier to find than a hotspot.
>
> Jimmie

Funny story... I work as a contractor and was in an office in Louisiana that supposedly had an internal wi-fi setup. Signal sure did seem weak for an internal connection. All the guys there said they didn't know what happened to it. "It used to work good".

Mr. Boss, the guy who installed it originally, was in town and said "hey, whats wrong with the wifi?". Turns out the little wireless router had fallen behind some other gear and become unplugged. All during this time the office traffic had been going thru the network of a nearby residence.

# 1955. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 02:53:17 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <Kd6dnfpL4PKDJ7HUnZ2dnUVZ8jCdnZ2d@pipex.net>
Source record: 3942
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

Telstar Electronics wrote:
> WA7PRC, you are absolutely correct that the design is based on the
> Analog Devices SSM2166 chip. I'm curious about your soldering comment.
> Why do you feel the soldering is poor? We have not had a single
> failure due to poor soldering. We have approximately 400 units in the
> field at this time. The field failure is around 0.2% during the one
> year period that these units have been on the market.
=======
That would mean that only 1 of the 400 units had failed in the field.
Is that correct ?

Frank KN6WH

## 1956. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 05:32:59 UTC
From: JB <nospam@goofball.net>
Message-ID: <fc5Xk.1034$us6.455@nwrddc01.gnilink.net>
Source record: 3943
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

> Just like feces and politicians, politics is a fact of life.
>
> Where's my coffee...? <G>
>
>
> Ed, N2ECW
>

Here's my favorite political tirade. It seems the russkis underestimated
the destructive power of the propaganda and now we are all screwed.
http://www.dailymotion.com/video/x32cxf_yuri-bezmenov

# 1957. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 05:47:33 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <ZIGdnXx2mbVuf7HUnZ2dnUVZ_gCdnZ2d@giganews.com>
Source record: 3944
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

Telstar Electronics wrote:
>> Bryan wrote:
>> cmdr buzz corey wrote:
>> > On Nov 14, 5:13 am, Telstar Electronics wrote:
>> >> The VoiceMax speech processor is not for everyone...
>> >> It's only for radio operators that want maximum range from their rig.
>>
>> > Along with maximum splatter.
>>
>> In looking closely at his photos, it appears his circuit is based on the
>> Analog Devices SSM2166 (product data:http://tinyurl.com/6eadpn). The
>> specifications indicate it *can* be operated cleanly. Of course, to set
>> it
>> up requires at least an oscilloscope... which many hams don't own (or
>> know
>> how to use).
>>
>> Based on the photos I've seen, I wouldn't buy one because of the poor
>> soldering:http://img105.imagevenue.com/img.php?image=97441_VoiceMax_122_173lo.jpg.
>> I'll just continue to use my 2-tube (2x 3-500Z) speech
>> "processor":http://www.rigpix.com/linears/sb220.htm
>>
>> Bryan WA7PRC

> WA7PRC, you are absolutely correct that the design is based on the
> Analog Devices SSM2166 chip. I'm curious about your soldering comment.
> Why do you feel the soldering is poor? We have not had a single
> failure due to poor soldering. We have approximately 400 units in the
> field at this time. The field failure is around 0.2% during the one
> year period that these units have been on the market.

According the photo (http://i17.ebayimg.com/06/i/000/cb/2d/2695_1.JPG) that I found on a certain well-known auction site, all but a few solder joints had what I call "reverse fillets". The solder connections should have a concave shape but instead have a convex shape (too much solder). The few that didn't appeared to be overheated, with a grainy appearance. I hate to say so but, though you've had a low failure rate, they definitely wouldn't pass scrutiny to meet Mil, CGMP, ISO, or IPC standards.

Bryan WA7PRC

# 1958. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 12:13:28 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <524a44b7-b89a-424c-b3f9-87a78d079dfb@t11g2000yqg.googlegroups.com>
Source record: 3945
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

> That would mean that only 1 of the 400 units had failed in the field.
> Is that correct ?
> Frank KN6WH

Absolutely correct Frank... and the failure was not a soldering issue.

# 1959. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 12:20:31 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <923b9fda-be05-4a8a-aab9-7e164692d82b@t11g2000yqg.googlegroups.com>
Source record: 3946
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

> According the photo (http://i17.ebayimg.com/06/i/000/cb/2d/
2695_1.JPG) that
> I found on a certain well-known auction site, all but a few solder joints
> had what I call "reverse fillets".  The solder connections should have a
> concave shape but instead have a convex shape (too much solder).   The few
> that didn't appeared to be overheated, with a grainy appearance.  I hate to
> say so but, though you've had a low failure rate, they definitely wouldn't
> pass scrutiny to meet Mil, CGMP, ISO, or IPC standards.
> Bryan WA7PRC

You are right about possibly having too much solder... but that is
certainly not a reliability issue.
Grainy appearance of some joints is not uncommon for the new RoHS
(high-concentration of tin) solders.
As for passing military specs... that was never our intention with
this product. Thanks for your comments.

# 1960. Re: SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 15:40:43 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <1172041d-85a0-45f5-b8ef-778bc6070920@x14g2000yqk.googlegroups.com>
Source record: 3947

On Nov 23, 1:07 pm, highlandham <rfbu...@nospam.com> wrote:
> > In the 78 issue there is one as you describe.  The broadband torroid sensors
> > are about standard in the autotuners and in some radios because they tune up
> > at low power.  They are small and don't add much inductance.  You might even
> > build it into a qrp rig and use a multi function meter scrapped out of an
> > old tape recorder or a led bar graph.
>
> ================================
> High intensity LEDs (for example those as used in traffic lights ,225 ea
> per light) already light-up at 45 microampere and hence can be directly
> used as a reflected power indicator instead of a meter.

Problem is, you don't get any visual output until the 1.6V biases the
LED, much higher than a germanium or silicon detector diode in a
traditional bridge. Some of the high-efficiency LED's are even higher
forward voltage drops, and can exhibit weird visual hysteresis effects
too at low current - meaning that they turn on at some current but
don't turn off until a much lower current.

Many QRP'ers use a clever idea of using an auditory output from the
bridge. For example Fig 7.46 in EMRFD. Works very well in night-time
QRP'ing, and tuning to reduce the squeal is incredibly intuitive.

Tim N3QE

# 1961. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 18:38:16 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-D4F3C4.09381826112008@netnews.worldnet.att.net>
Source record: 3948
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

In article
<f18ee327-fbd3-4e0b-9810-c36001b94a3a@e1g2000pra.googlegroups.com>,
seaweedsl <seaweedsteve@gmail.com> wrote:

> On Nov 21, 1:38 am, DaveC <m...@bogusdomain.net> wrote:
> > Looking for outdoor omni "whip" antenna for 2.4 GHz.
> >
> > Is there any reason to not go for the greatest gain antenna, given that cost
> > is not too important (within reason)?
> >
> > There are scads of these on the 'net. I'm looking for someone who has
> > experience with one or more of them and can make a recommendation for one.
>
> Higher gain omni has flatter /narrower beam. So it has to be pointed
> more accurately, tilting as needed to connect with desired AP.
>
> As Jeff says, there's no reason to use an omni for a client. Get a
> much cheaper directional antenna and you will get more gain with less
> interference. Pointing will be easier too.
>
> Take a look at the pattern for this one:
> http://pnt.zoovy.com/product/MD24-12/12dBi_24GHz_Mini_Directional_Antenna.html
>
> Or consider a combination weatherproof box with built in panel antenna
> like this: http://tinyurl.com/5kfd42
> (Choose the version that has the pigtail you need)
>
> That's the first thing you want to determine, by the way, how much
> gain is needed? Another thread....
>
>
> Steve

There are outfits that make Omni Antennas for the 2.4 Ghz Band, that
have Down-tilt designed into them. This helps deal with the flattening
of the Vertical Polarization for local connections. I have one located
on a 60ft Tower that has multiple AP's at various Azimuths, with ranges
out to 2 miles. Works well for a Central Distribution.

--
Bruce in alaska
add <path> after <fast> to reply

# 1962. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-26 18:56:20 UTC
From: Rectifier <redgranite_2000@yahoo.com>
Message-ID: <tZgXk.6309$W06.728@flpi148.ffdc.sbc.com>
Source record: 3949
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

"cmdr buzz corey" <cmdr-buzz-corey@mailcity.com> wrote in message
news:10048f70-225e-4ba3-acee-632151f1ac30@z28g2000prd.googlegroups.com...
> On Nov 14, 5:13 am, Telstar Electronics <briangrif...@sbcglobal.net>
> wrote:
>> The VoiceMax speech processor is not for everyone...
>> It's only for radio operators that want maximum range from their rig.
>
> Along with maximum splatter.

LOL.

His website claims that Mouser Electronics is a "partner." Searches on
Mouser for "Telstar" and "VoiceMax" return zero results. Hmm. . does buying
some parts from Mouser make them a "partner." If so, I'm a "partner" with
Mouser, too.

LOL

LOL

# 1963. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 01:22:44 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <020a50e0-c5ad-4a71-8e59-eb90b328855d@z1g2000yqn.googlegroups.com>
Source record: 3950
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

> His website claims that Mouser Electronics is a "partner."  Searches on
> Mouser for "Telstar" and "VoiceMax" return zero results.  Hmm. . does buying
> some parts from Mouser make them a "partner."  If so, I'm a "partner" with
> Mouser, too.

The dictionary defines partner as "One that is united or associated
with another or others in an activity or a sphere of common interest."
So yes, in your example... you would be a partner of Mouser.

# 1964. Re: Danby Mirowave Oven = lousy faraday cage

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 04:39:55 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <348e0606-a3d3-4569-9ef3-321bcb9ef325@t3g2000yqa.googlegroups.com>
Source record: 3801

Hey OM:

I have a zapper field strength meter and even on the most attenuated
setting I read a 400W microwave oven form 100ft away. Now if that
thing lites up an NE2 bulb outside the cabinet then you better worry.
The guts of a microwave oven is no faraday cage. You want a real
faraday cage did you try tossing it in the 12 ft section of a built in
swimming pool?

73 OM
n8zu

On Nov 24, 2:42 am, MarkAren <markare...@yahoo.com> wrote:
> I would think 10mW-ish (+10dBm) leakage around the seal of an oven
> would be reasonably safe, this is down from 1kW (+60dBm) output from
> the magnetron.
>
> 50dB attenuation should have a marked impact on range for a cordless
> phone.
>
> Still all rather inconclusive, but maybe time to buy a leakage
> detector just to be safe...
>
> -Mark
>
> On Nov 24, 2:56 pm, RFI-EMI-GUY <Rhyol...@NETTALLY.COM> wrote:
>
>
>
> > Alan Cruikshank wrote:
> > > I have a Motorola Cordless Phone model SD4551, and a Danby Mirowave oven
> > > model DMW902W(-1). I tried putting the cordless handset into the closed
> > > microwave and sucessfully paged it. Should I be worried?
>
> > Next time you try this, put the oven in defrost mode for about 30
> > seconds. The "problem" should resolve itself. };^}
>
> > Your Motorola phone is 2.4 GHz model the results are interesting, but
> > not conclusive since the seal is probably only effective for some 10's
> > of dB's and your phone system has an effective path loss of perhaps 100 dB.
>
> > --
> > Joe Leikhim K4SAT
> > "The RFI-EMI-GUY"©
>

> > "Treason doth never prosper: what's the reason?
> > For if it prosper, none dare call it treason."
>
> > "Follow The Money"  ;-P- Hide quoted text -
>
> - Show quoted text -

# 1965. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 06:30:50 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <DPedndJHQ50Ho7PUnZ2dnUVZ_tzinZ2d@web-ster.com>
Source record: 3802

On Fri, 21 Nov 2008 22:30:24 -0400, exray wrote:

> This is a really dumb question but it dawned on me that I did not know
> the correct answer.
>
> In terms of old transmitters from the 20s/30s...In a crystal oscillator
> I understand the concept of setting the oscillator output tank to
> favor the harmonic from the crystal. (Stop me if I'm wrong already...)

You're wrong already, kinda.

Most of the schematics that I've seen from back then have the crystal oscillating at it's fundamental. If the energy extracted from the oscillator is at twice the crystal frequency it's because of harmonics generated in the tube.

I don't have a lot of reference material to look at, but I don't think that using a crystal's overtones to generate RF really picked up until the 50's (it was probably done during WW-II, but I only see it put forth as a common method starting with my '50's ARRL handbooks).

> But in a doubling amplifier stage am I counting on having enough
> harmonic content at the input or am I creating the harmonic with the
> non-linearity of the amplifier?

You're creating the harmonic with the nonlinearity of the amplifier. A class C stage (which is pretty much assumed for CW transmitters) is very rich in harmonics, and the harder you drive it the higher the harmonics go. So it's pretty easy to get one to generate considerable energy at a harmonic frequency, which you then pick out with your tank circuit.

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

Need to learn how to apply control theory in your embedded system?
"Applied Control Theory for Embedded Systems" by Tim Wescott
Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

# 1966. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 12:31:55 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <ggm3vu0q76@news2.newsguy.com>
Source record: 3803

Tim Wescott wrote:
> On Fri, 21 Nov 2008 22:30:24 -0400, exray wrote:
>
>> This is a really dumb question but it dawned on me that I did not know
>> the correct answer.
>>
>> In terms of old transmitters from the 20s/30s...In a crystal oscillator
>> I understand the concept of setting the oscillator output tank to
>> favor the harmonic from the crystal. (Stop me if I'm wrong already...)
>
> You're wrong already, kinda.
>
> Most of the schematics that I've seen from back then have the crystal
> oscillating at it's fundamental. If the energy extracted from the
> oscillator is at twice the crystal frequency it's because of harmonics
> generated in the tube.

Ok, I'll buy that. One description I read of the tritet osc described
it as being an oscillator with inherent class c amplification, hence the
plate circuit being tuned to the desired 'harmonic' and the crystal is
indeed operating at its fundamental freq.

-Bill

## 1967. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 14:07:14 UTC
From: Nelson Ogden <nelsonogden-remove-this-to-email-me@gmail.com>
Message-ID: <kMxXk.5169$8_3.4782@flpi147.ffdc.sbc.com>
Source record: 3804

Outdoor lawn/garden water timer boxes work well for outdoor wireless
projects. They are inexpensive, too.

"highlandham" <rfburns@nospam.com> wrote in message
news:gb6dneuUo5Ygw7rUnZ2dnUVZ8qbinZ2d@pipex.net...
> Dave wrote:
> > Short Pringle's can, 1/4 wave probe, 1/2 wave from closed end, soldered
> > to female TNC.
> ==========
> Yes these cans work well ; the problem is the type and length of coax .
> A suitable arangement is a WiFi router near the antenna (if necessary in
> a wx proof box ) with an ethernet cat5 cable running to the equipment.
>
> Another possibility is a USB WiFi adaptor in the focal point of a
> satellite dish with a USB to ethernet converter.
>
> Frank KN6WH

# 1968. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 15:33:42 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <ggmekg$fmh$1@news.albasani.net>
Source record: 3805

Tel star Electronics briangriffey@sbcglobal.net <briangriffey@sbcglobal.net>
wrote:
>> His website claims that Mouser Electronics is a "partner." Searches on
>> Mouser for "Telstar" and "VoiceMax" return zero results. Hmm. . does buying
>> some parts from Mouser make them a "partner." If so, I'm a "partner" with
>> Mouser, too.
>
> The dictionary defines partner as "One that is united or associated
> with another or others in an activity or a sphere of common interest."
> So yes, in your example... you would be a partner of Mouser.
> briangriffey@sbcglobal.net <briangriffey@sbcglobal.net>

If I advertised that my company was a partner with HP (we bought the
computers from them) and Kenco I think they may object .......

Steve H

# 1969. Interface Toughbook Mic Input to Line Out from SWL's PSK20

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 16:35:48 UTC
From: "Tom, N3IJ" <n3ij@comcast.net>
Message-ID: <87af20e2-cf37-4334-bfc6-c532ac8b4394@w3g2000yqc.googlegroups.com>
Source record: 3806

I want to interface the audio from the Small Wonder Labs PSK20 to the mic input in the Toughbook CF27 laptop. The computer has no line input, and I plan to use the mic input via the port replicator. The Toughbook reference manual doesn't give any specs for the mic input. The user manual does contain this caution:

"Use only a monaural condenser microphone (miniature jack). Using an input source other than a monaural condenser microphone may not allow audio to be input or may damage the equipment."

Reading suggests that an L pad in the 40-60 dB range is required, but I would like to narrow this down before experimenting. Any experiences using the Toughbook on PSK would be helpful.

Thanks, Tom, N3IJ

## 1970. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 16:52:56 UTC
From: seaweedsl <seaweedsteve@gmail.com>
Message-ID: <249c95e5-13df-4b5d-85e5-78378261b1ab@q30g2000prq.googlegroups.com>
Source record: 3807
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Nov 26, 12:38 pm, Bruce in alaska <f...@btpost.net> wrote:

> There are outfits that make Omni Antennas for the 2.4 Ghz Band, that
> have Down-tilt designed into them.......Works well for a Central Distribution.
>
> --

Agreed, for an AP, if 360 coverage is needed, an omni with downtilt
is an appropriate option.

Not for clients.

# 1971. Re: Interface Toughbook Mic Input to Line Out from SWL's PSK20

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 17:53:24 UTC
From: JB <nospam@goofball.net>
Message-ID: <o8BXk.1445$us6.477@nwrddc01.gnilink.net>
Source record: 3808

"Tom, N3IJ" <n3ij@comcast.net> wrote in message
news:87af20e2-cf37-4334-bfc6-c532ac8b4394@w3g2000yqc.googlegroups.com...
> I want to interface the audio from the Small Wonder Labs PSK20 to the
> mic input in the Toughbook CF27 laptop. The computer has no line
> input, and I plan to use the mic input via the port replicator. The
> Toughbook reference manual doesn't give any specs for the mic input.
> The user manual does contain this caution:
>
> "Use only a monaural condenser microphone (miniature jack). Using
> an input source other than a monaural condenser microphone
> may not allow audio to be input or may damage the equipment."
>
> Reading suggests that an L pad in the 40-60 dB range is required, but
> I would like to narrow this down before experimenting. Any experiences
> using the Toughbook on PSK would be helpful.
>
> Thanks, Tom, N3IJ

Microphone does work well if you have a decent one. Also has the advantage of being able to record both sides of conversations for logging purposes.

The inputs are usually 500-2000 ohm impedance and have a DC bias for powering the mic.

I have always used what is in the junk box to make the transition. The speaker output is fed to a low impedance audio transformer. It may be 8 ohm to 2000 ohm or 500-500 ohm or whatever in that range. Such things are easily obtainable at RS and other sources. The output of the transformer is loaded with a resistor of 1k-10 k and a series resistor of 100k or more feeds the mic input. This will usually reduce the input to mic level and the transformer will break up any common mode potentials between the chassis of the computer and the radio that tend to bring hum and noise. You will also see a flatter response than with acoustic coupling. You should be able to reduce the mic level in the mixer applet to normal level. You may have to play with the 100k and may need to shunt the mic input as well but you will find this by experimentation to get it right. A purist might also series the input with a 1uf to 10 uf capacitor to completely block the DC component but the series 100k should limit that sufficiently. Some experimentation could be done for more precise equalization if you still have time on your hands.

This should work with any sound card mode.

## 1972. Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 18:45:33 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <pQBXk.774$nD1.745@bignews5.bellsouth.net>
Source record: 3809

Anybody here ever build a passive grid linear amp?
That's where you simply terminate the grid of a tetrode with a 50 ohm resistor and just drive it directly. Svetlana recommended that configuration with their 4cx400, 4xc800 and 4cx1600 tubes, and it should work well with more commone surplus 4cx250's.

I was thinking of using a 4:1 or 9:1 balum and increasing the grid resistor value to 200 or 450 ohms to reduce the amount of driving power required. With the 4cx250 a peak grid drive of about 50 volts is required in class AB1. With a 50 ohm termination the driving power would be 50 watts, with a 200 ohm termination 12.5 watts, and with the 450 ohm termination 5.6 watts. That's actually just the power sucked up in the resistor, but the tube requires less than 1 watt of drive itself in class AB1. Some power might be lost in the balum, so maybe the actual driving power might increase by a watt or two. Since I wanted this to be a final for a QRP rig the larger terminating resistance looked like a better way to go. The only issue is how high can you go with the termination resistance and keep the tube stable without neutralization being required?

# 1973. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 19:10:55 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-6A54B4.10105927112008@netnews.worldnet.att.net>
Source record: 3810
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

In article
<249c95e5-13df-4b5d-85e5-78378261b1ab@q30g2000prq.googlegroups.com>,
seaweedsl <seaweedsteve@gmail.com> wrote:

> On Nov 26, 12:38 pm, Bruce in alaska <f...@btpost.net> wrote:
>
> > There are outfits that make Omni Antennas for the 2.4 Ghz Band, that
> > have Down-tilt designed into them.....Works well for a Central
> > Distribution.
> >
> > --
>
>
> Agreed, for an AP, if 360 coverage is needed, an omni with downtilt
> is an appropriate option.
>
> Not for clients.

Yep, for Clients, I use 12dbi Panel Antennas, which are very compact and
provide the required F/B Ratio and gain, for each link.

--
Bruce in alaska
add <path> after <fast> to reply

## 1974. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 19:16:51 UTC
From: Bruce in alaska <fast@btpost.net>
Message-ID: <fast-1B83E4.10170327112008@netnews.worldnet.att.net>
Source record: 3811

In article <kMxXk.5169$8_3.4782@flpi147.ffdc.sbc.com>,
"Nelson Ogden" <nelsonogden-remove-this-to-email-me@gmail.com> wrote:

> Outdoor lawn/garden water timer boxes work well for outdoor wireless
> projects. They are inexpensive, too.

I use Plastic Buckets turned upside down, that fit over a 1/2" Plywood
Base cut to just fit inside the open rim of the bucket. They make
Excellent RayDomes clear up thru 5 Ghz, and come in various sizes from
Pints, Quarts, and Gallons, up thru 5 USG.

--
Bruce in alaska
add <path> after <fast> to reply

# 1975. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 19:28:25 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B63890F04B3F2MDWN@194.177.96.78>
Source record: 3812

Howdy,

I've only read about them. G2DAF wrote extensively
on pasive grid linears.

I think the ultimate value of grid resistor will
depend on the grid capacitance and layout parasitics.
The articles I've read use 300 Ohms as the grid swamping
resistor but with a 4CX250 450 Ohms might be possible.

Here is an article you may find useful.
http://www.radioamator.ro/articole/files/291_1.pdf

I have a bucket full of 4CX250B's and would like
to try passive grid someday. Please Let us know
how yours shapes up if you decide to build one.

73,
Grumpy

ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in
news:pQBXk.774$nD1.745@bignews5.bellsouth.net:

> Anybody here ever build a passive grid linear amp?
> That's where you simply terminate the grid of a tetrode with a 50 ohm
> resistor and just drive it directly. Svetlana recommended that
> configuration with their 4cx400, 4xc800 and 4cx1600 tubes, and it should
> work well with more commone surplus 4cx250's.
>
> I was thinking of using a 4:1 or 9:1 balum and increasing the grid
> resistor value to 200 or 450 ohms to reduce the amount of driving power
> required. With the 4cx250 a peak grid drive of about 50 volts is
> required in class AB1. With a 50 ohm termination the driving power
> would be 50 watts, with a 200 ohm termination 12.5 watts, and with the
> 450 ohm termination 5.6 watts. That's actually just the power sucked up
> in the resistor, but the tube requires less than 1 watt of drive itself
> in class AB1. Some power might be lost in the balum, so maybe the
> actual driving power might increase by a watt or two. Since I wanted
> this to be a final for a QRP rig the larger terminating resistance
> looked like a better way to go. The only issue is how high can you go
> with the termination resistance and keep the tube stable without
> neutralization being required?
>

# 1976. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 20:47:23 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <47ae8004-a482-406b-99fb-31fb85ed9222@20g2000yqt.googlegroups.com>
Source record: 3813
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

> If I advertised that my company was a partner with HP (we bought the
> computers from them) and Kenco I think they may object .......
> Steve H

Well... I can't speak for your business... but my partners are
overjoyed that they are mentioned and have links available to their
sites.
www.telstar-electronics.com

# 1977. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 21:13:32 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <TZDXk.881$dc4.619@bignews2.bellsouth.net>
Source record: 3814

Grumpy The Mule wrote:
> Howdy,
>
>
> I've only read about them. G2DAF wrote extensively
> on pasive grid linears.
>
> I think the ultimate value of grid resistor will
> depend on the grid capacitance and layout parasitics.
> The articles I've read use 300 Ohms as the grid swamping
> resistor but with a 4CX250 450 Ohms might be possible.
>
> Here is an article you may find useful.
> http://www.radioamator.ro/articole/files/291_1.pdf
>
> I have a bucket full of 4CX250B's and would like
> to try passive grid someday. Please Let us know
> how yours shapes up if you decide to build one.
>
>
> 73,
> Grumpy
>
>
> ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in
> news:pQBXk.774$nD1.745@bignews5.bellsouth.net:
>
>> Anybody here ever build a passive grid linear amp?
>> That's where you simply terminate the grid of a tetrode with a 50 ohm
>> resistor and just drive it directly. Svetlana recommended that
>> configuration with their 4cx400, 4xc800 and 4cx1600 tubes, and it should
>> work well with more commone surplus 4cx250's.
>>
>> I was thinking of using a 4:1 or 9:1 balum and increasing the grid
>> resistor value to 200 or 450 ohms to reduce the amount of driving power
>> required. With the 4cx250 a peak grid drive of about 50 volts is
>> required in class AB1. With a 50 ohm termination the driving power
>> would be 50 watts, with a 200 ohm termination 12.5 watts, and with the
>> 450 ohm termination 5.6 watts. That's actually just the power sucked up
>> in the resistor, but the tube requires less than 1 watt of drive itself
>> in class AB1. Some power might be lost in the balum, so maybe the
>> actual driving power might increase by a watt or two. Since I wanted
>> this to be a final for a QRP rig the larger terminating resistance
>> looked like a better way to go. The only issue is how high can you go

>> with the termination resistance and keep the tube stable without
>> neutralization being required?
>>
>
That's an interesting article. He shows no matching network between his exciter and the linear so there would be a 6:1 SWR with the 300 ohm termination, though a tube type transmitter with a Pi network might still be able to load into it. Deriving the screen voltage from the rf drive seems a hybrid method of doing grounded grid. I was thinking of an amplifier with normal bias and screen supplies which would reduce the drive required.

I have a pair of used 7034's (4cx250's with glass seals) but I have no idea how much life (if any) are left in them. My idea was to build an amplifier chassis that could be used to experiment with several tube configurations. I've found a source for a 400VA toroidal power transformer with two 550v and two 6.3v (5A) secondaries and a 120/240 v primary for about $65 postpaid. In a bridge rectifier configuration with a capacitor input filter using large capacitors it should yield about 1400 volts under load. This would be a suitable plate voltage for a single 811A/572B or a 4CX250A. With the bridge rectifier configuration the center tap of the HV secondary will provide 700 volts that can be regulated down to the 300-350 volts required for the screen of a 4CX250. One of the 6v filament windings would power the tube (unless I find some 4CX250F/G's which would require an extra 25v transformer) and the other winding could be used with a voltage multiplier for the bias supply (or drive another filament transformer bassackwards for that purpose).

So I could build up a power supply and tank circuit that could serve either configuration, and swap out one of two chassis; one for a single 811A/572B and one for a 4CX250.350/400A. The target amp would be between 150 to 250 watts output (a nice afterburner for a 10-20 watt QRP rig I'm thinking about).

# 1978. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 22:44:29 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <ggn7sd$eu2$1@news.albasani.net>
Source record: 3815
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

Tel star Electronics briangriffey@sbcglobal.net
<briangriffey@sbcglobal.net> wrote:
>> If I advertised that my company was a partner with HP (we bought the
>> computers from them) and Kenco I think they may object .......
>> Steve H
>
> Well... I can't speak for your business... but my partners are
> overjoyed that they are mentioned and have links available to their
> sites.
> www.telstar-electronics.com briangriffey@sbcglobal.net <briangriffey@sbcglobal.net>
>
I bet they don't have a link to your site;c)

Steve H

# 1979. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-27 23:18:22 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <hxwGZKG+qyLJFAQq@ifwtech.co.uk>
Source record: 3816

Grumpy The Mule wrote:
>
>I've only read about them. G2DAF wrote extensively on pasive grid
>linears.
>
>I think the ultimate value of grid resistor will depend on the grid
>capacitance and layout parasitics. The articles I've read use 300 Ohms
>as the grid swamping resistor but with a 4CX250 450 Ohms might be
>possible.
>
>Here is an article you may find useful.
>http://www.radioamator.ro/articole/files/291_1.pdf
>
>I have a bucket full of 4CX250B's and would like to try passive grid
>someday. Please Let us know how yours shapes up if you decide to build
>one.
>

The defining feature of a G2DAF amplifier is not the untuned passive grid input, but the method of grid biasing. It has no control grid bias and the screen voltage is developed by rectifying the RF drive.

Most passive grid tetrode amplifiers use conventional fixed bias voltages on g1 and g2. Commercial examples include the Alpha 91b/99 and the Australian Emtron range.

G2DAF's published articles on amplifiers are on my web site, and the RSGB historical collection still has his original receiver, transmitter and amplifier, along with many hand-written notes. The 2 x 4-125A amplifier that featured in his published articles still exists, but at some later time he had removed the screen rectifier tubes and converted the amplifier into a very basic grounded-grid configuration.

--

73 from Ian GM3SEK
http://www.ifwtech.co.uk/g3sek

## 1980. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 00:00:34 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <c227abd5-71b7-4351-aff0-f50ce28999bd@s20g2000yqh.googlegroups.com>
Source record: 3817
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

> I bet they don't have a link to your site;c)
> Steve H

That's entirely up to them...
www.telstar-electronics.com

# 1981. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 00:42:15 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <J5HXk.1035$UI2.175@bignews6.bellsouth.net>
Source record: 3818

Ian White GM3SEK wrote:
> Grumpy The Mule wrote:
>>
>> I've only read about them. G2DAF wrote extensively on pasive grid
>> linears.
>>
>> I think the ultimate value of grid resistor will depend on the grid
>> capacitance and layout parasitics. The articles I've read use 300 Ohms
>> as the grid swamping resistor but with a 4CX250 450 Ohms might be
>> possible.
>>
>> Here is an article you may find useful.
>> http://www.radioamator.ro/articole/files/291_1.pdf
>>
>> I have a bucket full of 4CX250B's and would like to try passive grid
>> someday. Please Let us know how yours shapes up if you decide to
>> build one.
>>
>
> The defining feature of a G2DAF amplifier is not the untuned passive
> grid input, but the method of grid biasing. It has no control grid bias
> and the screen voltage is developed by rectifying the RF drive.
>
> Most passive grid tetrode amplifiers use conventional fixed bias
> voltages on g1 and g2. Commercial examples include the Alpha 91b/99 and
> the Australian Emtron range.
>
>
> G2DAF's published articles on amplifiers are on my web site, and the
> RSGB historical collection still has his original receiver, transmitter
> and amplifier, along with many hand-written notes. The 2 x 4-125A
> amplifier that featured in his published articles still exists, but at
> some later time he had removed the screen rectifier tubes and converted
> the amplifier into a very basic grounded-grid configuration.
>
>
>
I really don't see any advantage in his circuit over a conventional zero
bias grounded grid amp, at least not with the 4-xxx series of tubes.
With the 4CX250 series it makes some sense since these tubes CAN'T be
run in zero bias grounded grid due to the fragile grid structure in
these tubes.

# 1982. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 05:00:13 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <bY2dnVzICupA57LUnZ2dnUVZ_j6dnZ2d@web-ster.com>
Source record: 3819

On Thu, 27 Nov 2008 13:45:33 -0500, ken scharf wrote:

> Anybody here ever build a passive grid linear amp? That's where you
> simply terminate the grid of a tetrode with a 50 ohm resistor and just
> drive it directly. Svetlana recommended that configuration with their
> 4cx400, 4xc800 and 4cx1600 tubes, and it should work well with more
> commone surplus 4cx250's.
>
> I was thinking of using a 4:1 or 9:1 balum and increasing the grid
> resistor value to 200 or 450 ohms to reduce the amount of driving power
> required. With the 4cx250 a peak grid drive of about 50 volts is
> required in class AB1. With a 50 ohm termination the driving power
> would be 50 watts, with a 200 ohm termination 12.5 watts, and with the
> 450 ohm termination 5.6 watts. That's actually just the power sucked up
> in the resistor, but the tube requires less than 1 watt of drive itself
> in class AB1. Some power might be lost in the balum, so maybe the
> actual driving power might increase by a watt or two. Since I wanted
> this to be a final for a QRP rig the larger terminating resistance
> looked like a better way to go. The only issue is how high can you go
> with the termination resistance and keep the tube stable without
> neutralization being required?

This should jump out at you with the proper circuit analysis. Just
analyze the circuit with a parallel tank load on the plate, and look for
negative resistance showing up at the grid. Your grid swamping resistor
would need to take care of the worst-case negative resistance.

Then spend a month tearing your hair out over parasitics that increase
the plate-grid coupling over and above what the data sheet says they are.

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

Need to learn how to apply control theory in your embedded system?
"Applied Control Theory for Embedded Systems" by Tim Wescott
Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

# 1983. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 09:45:07 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <7d063881-f31a-40a2-9711-258c5aee4e01@k8g2000yqn.googlegroups.com>
Source record: 3820

On Nov 28, 12:00 am, Tim Wescott <t...@seemywebsite.com> wrote:
> On Thu, 27 Nov 2008 13:45:33 -0500, ken scharf wrote:
> > Anybody here ever build a passive grid linear amp? That's where you
> > simply terminate the grid of a tetrode with a 50 ohm resistor and just
> > drive it directly. Svetlana recommended that configuration with their
> > 4cx400, 4xc800 and 4cx1600 tubes, and it should work well with more
> > commone surplus 4cx250's.
>
> > I was thinking of using a 4:1 or 9:1 balum and increasing the grid
> > resistor value to 200 or 450 ohms to reduce the amount of driving power
> > required. With the 4cx250 a peak grid drive of about 50 volts is
> > required in class AB1. With a 50 ohm termination the driving power
> > would be 50 watts, with a 200 ohm termination 12.5 watts, and with the
> > 450 ohm termination 5.6 watts. That's actually just the power sucked up
> > in the resistor, but the tube requires less than 1 watt of drive itself
> > in class AB1. Some power might be lost in the balum, so maybe the
> > actual driving power might increase by a watt or two. Since I wanted
> > this to be a final for a QRP rig the larger terminating resistance
> > looked like a better way to go. The only issue is how high can you go
> > with the termination resistance and keep the tube stable without
> > neutralization being required?
>
> This should jump out at you with the proper circuit analysis. Just
> analyze the circuit with a parallel tank load on the plate, and look for
> negative resistance showing up at the grid. Your grid swamping resistor
> would need to take care of the worst-case negative resistance.
>
> Then spend a month tearing your hair out over parasitics that increase
> the plate-grid coupling over and above what the data sheet says they are.
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Hey OM:

I don't see plate grid coupling with a grounded screen and the cathode
at negative screen voltage? eh?

73 OM
n8zu

# 1984. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 13:27:28 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <ggork0$3pr$1@news.albasani.net>
Source record: 3821

ken scharf wrote:

>>
> I really don't see any advantage in his circuit over a conventional zero
> bias grounded grid amp, at least not with the 4-xxx series of tubes.
> With the 4CX250 series it makes some sense since these tubes CAN'T be
> run in zero bias grounded grid due to the fragile grid structure in
> these tubes.
You only needed 20W of drive power and a single HT supply. I have one
using a pair of 813s, 10W from my TS-120 drives it to about 200W output.

It looks to be exactly the same layout as the one on Ian's site but has
had the valve rectifiers replaced with solid state at some time.

Steve H

# 1985. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 14:58:13 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <iyTXk.1911$ba6.1332@bignews9.bellsouth.net>
Source record: 3822

Stev eH wrote:
> ken scharf wrote:
>
>>>
>> I really don't see any advantage in his circuit over a conventional
>> zero bias grounded grid amp, at least not with the 4-xxx series of
>> tubes. With the 4CX250 series it makes some sense since these tubes
>> CAN'T be run in zero bias grounded grid due to the fragile grid
>> structure in these tubes.
> You only needed 20W of drive power and a single HT supply. I have one
> using a pair of 813s, 10W from my TS-120 drives it to about 200W output.
>
> It looks to be exactly the same layout as the one on Ian's site but has
> had the valve rectifiers replaced with solid state at some time.
>
> Steve H
200W from a PAIR of 813's? You must be running them with less than
1.5KV on the plates. That's the problem with 813's, they don't live up
to their potential (pardon the pun) unless you run them with lots of HV.
The point though is that in conventional grounded grid (all three
'grids' grounded) you still don't need a SG supply and the drive power
should be about the same.

# 1986. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 15:06:43 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <gGTXk.1914$ba6.1157@bignews9.bellsouth.net>
Source record: 3823

raypsi wrote:
> On Nov 28, 12:00 am, Tim Wescott <t...@seemywebsite.com> wrote:
>> On Thu, 27 Nov 2008 13:45:33 -0500, ken scharf wrote:
>>> Anybody here ever build a passive grid linear amp? That's where you
>>> simply terminate the grid of a tetrode with a 50 ohm resistor and just
>>> drive it directly. Svetlana recommended that configuration with their
>>> 4cx400, 4xc800 and 4cx1600 tubes, and it should work well with more
>>> commone surplus 4cx250's.
>>> I was thinking of using a 4:1 or 9:1 balum and increasing the grid
>>> resistor value to 200 or 450 ohms to reduce the amount of driving power
>>> required. With the 4cx250 a peak grid drive of about 50 volts is
>>> required in class AB1. With a 50 ohm termination the driving power
>>> would be 50 watts, with a 200 ohm termination 12.5 watts, and with the
>>> 450 ohm termination 5.6 watts. That's actually just the power sucked up
>>> in the resistor, but the tube requires less than 1 watt of drive itself
>>> in class AB1. Some power might be lost in the balum, so maybe the
>>> actual driving power might increase by a watt or two. Since I wanted
>>> this to be a final for a QRP rig the larger terminating resistance
>>> looked like a better way to go. The only issue is how high can you go
>>> with the termination resistance and keep the tube stable without
>>> neutralization being required?
>> This should jump out at you with the proper circuit analysis. Just
>> analyze the circuit with a parallel tank load on the plate, and look for
>> negative resistance showing up at the grid. Your grid swamping resistor
>> would need to take care of the worst-case negative resistance.
>>
>> Then spend a month tearing your hair out over parasitics that increase
>> the plate-grid coupling over and above what the data sheet says they are.
>>
>> --
>> Tim Wescott
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>> Elsevier/Newnes,http://www.wescottdesign.com/actfes/actfes.html
>
> Hey OM:
>
> I don't see plate grid coupling with a grounded screen and the cathode
> at negative screen voltage? eh?
>
> 73 OM
> n8zu

I think he means that any feedback which would induce instability can be translated as a negative resistance seen at the grid (all an oscillator is after all, is a negative resistance generator). And ANY tube exhibits some degree of plate to grid coupling in the form of stray capacitance between the elements. Even Pentodes with two grounded (for rf) elements between the plate and grid show SOME coupling (though in the case of screen grid tubes the value is reduced to values of a few pf or less). The grounded grid circuit reduces the feedback even more by introducing a phase shift as well, but some grounded grid amps still need some neutralization (especially if you mess things up by putting 4 bottles in parallel.)

# 1987. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 16:39:34 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <ba72175f-9614-46ec-922e-7a75331dd3d5@g38g2000yqn.googlegroups.com>
Source record: 3824

On Nov 27, 1:45 pm, ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
> Anybody here ever build a passive grid linear amp?
> That's where you simply terminate the grid of a tetrode with a 50 ohm
> resistor and just drive it directly.  Svetlana recommended that
> configuration with their 4cx400, 4xc800 and 4cx1600 tubes, and it should
> work well with more commone surplus 4cx250's.
>
> I was thinking of using a 4:1 or 9:1 balum and increasing the grid
> resistor value to 200 or 450 ohms to reduce the amount of driving power
> required.  With the 4cx250 a peak grid drive of about 50 volts is
> required in class AB1.  With a 50 ohm termination the driving power
> would be 50 watts, with a 200 ohm  termination 12.5 watts, and with the
> 450 ohm termination 5.6 watts.  That's actually just the power sucked up
> in the resistor, but the tube requires less than 1 watt of drive itself
> in class AB1.  Some power might be lost in the balum, so maybe the
> actual driving power might increase by a watt or two.   Since I wanted
> this to be a final for a QRP rig the larger terminating resistance
> looked like a better way to go.  The only issue is how high can you go
> with the termination resistance and keep the tube stable without
> neutralization being required?

Ive seen one amp that I know worked using a 4cx250B using a 16:1
transformer. He used tha amp on 6M. I think he still added a little
capacitance to tune out some of the inductance in the transformers.
The best I remember he really didnt have to do this. He just did it so
he would see a perfect 1:1 SWR beteween the exciter and amp. I
modified an old 2X 6146 amp with tunned grid by ripping out the tuned
circuit and replacing it with a 200 ohm resistor. 5 watts was more
than enough drive.

Jimmie

# 1988. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 17:02:46 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <QMSdnVfrn-qrua3UnZ2dnUVZ_uWdnZ2d@web-ster.com>
Source record: 3825

On Fri, 28 Nov 2008 10:06:43 -0500, ken scharf wrote:

> raypsi wrote:
>> On Nov 28, 12:00 am, Tim Wescott <t...@seemywebsite.com> wrote:
>>> On Thu, 27 Nov 2008 13:45:33 -0500, ken scharf wrote:
>>>> Anybody here ever build a passive grid linear amp? That's where you
>>>> simply terminate the grid of a tetrode with a 50 ohm resistor and
>>>> just drive it directly. Svetlana recommended that configuration with
>>>> their 4cx400, 4xc800 and 4cx1600 tubes, and it should work well with
>>>> more commone surplus 4cx250's.
>>>> I was thinking of using a 4:1 or 9:1 balum and increasing the grid
>>>> resistor value to 200 or 450 ohms to reduce the amount of driving
>>>> power required. With the 4cx250 a peak grid drive of about 50 volts
>>>> is required in class AB1. With a 50 ohm termination the driving
>>>> power would be 50 watts, with a 200 ohm termination 12.5 watts, and
>>>> with the 450 ohm termination 5.6 watts. That's actually just the
>>>> power sucked up in the resistor, but the tube requires less than 1
>>>> watt of drive itself in class AB1. Some power might be lost in the
>>>> balum, so maybe the actual driving power might increase by a watt or
>>>> two. Since I wanted this to be a final for a QRP rig the larger
>>>> terminating resistance looked like a better way to go. The only
>>>> issue is how high can you go with the termination resistance and keep
>>>> the tube stable without neutralization being required?
>>> This should jump out at you with the proper circuit analysis. Just
>>> analyze the circuit with a parallel tank load on the plate, and look
>>> for negative resistance showing up at the grid. Your grid swamping
>>> resistor would need to take care of the worst-case negative
>>> resistance.
>>>
>>> Then spend a month tearing your hair out over parasitics that increase
>>> the plate-grid coupling over and above what the data sheet says they
>>> are.
>>>
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>>
>> Hey OM:
>>

>> I don't see plate grid coupling with a grounded screen and the cathode
>> at negative screen voltage? eh?
>>
>> 73 OM
>> n8zu
> I think he means that any feedback which would induce instability can be
> translated as a negative resistance seen at the grid (all an oscillator
> is after all, is a negative resistance generator).

Yes, that's what I meant. And if you're looking to figure out the
largest parallel grid resistance that will still effectively swamp out
the instability, I think that's the best approach to take.

> And ANY tube
> exhibits some degree of plate to grid coupling in the form of stray
> capacitance between the elements. Even Pentodes with two grounded (for
> rf) elements between the plate and grid show SOME coupling (though in
> the case of screen grid tubes the value is reduced to values of a few pf
> or less). The grounded grid circuit reduces the feedback even more by
> introducing a phase shift as well, but some grounded grid amps still
> need some neutralization (especially if you mess things up by putting 4
> bottles in parallel.)

In theory, any tube is going to have _some_ coupling straight through the
grids. In practice its probably vanishingly small.

But for many tubes you'll have to spend a long time optimizing the
physical layout of the circuit before you have more coupling through the
tube than you have around it.

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

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Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

# 1989. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-28 17:49:28 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <ggpav7$rsd$1@news.albasani.net>
Source record: 3826

me9@privacy.net wrote:
> On 28 Nov,
> ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net> wrote:
>
>> 200W from a PAIR of 813's? You must be running them with less than
>> 1.5KV on the plates. That's the problem with 813's, they don't live up
>> to their potential (pardon the pun) unless you run them with lots of HV.
>> The point though is that in conventional grounded grid (all three
>> 'grids' grounded) you still don't need a SG supply and the drive power
>> should be about the same.
>
> I could get well over 400w (probably nearer 800w) out of mine, with 2,5-3KV
> on the anodes.
>
> With G2DAF mode I found the screen grid supply (from the RF drive) produced
> lots more TVI than when conventionally used in class AB2. That's why I
> changed. I used separate screen and bias supplies, but made sure the anode
> supply was present before the screen was energised.
>
That's with 10W of drive (From a 10W radio) and 2KV on the anode,
maximum output is around 600W with about 40W of drive. You can wet away
with over 3KV on the anode if you are careful.
If you introduce a 4:1 transformer on the input the drive required is
far lower.
I have a KW500 with a single 813 in grounded grid, it produces 40W with
10W in and is a bad load for a transistor TX (No tuned input as it was
designed to work with a valve TX). With passive grid you don't need a
separate tuned input for each band so it keeps it simple.

Steve H

# 1990. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 04:12:23 UTC
From: cmdr buzz corey <cmdr-buzz-corey@mailcity.com>
Message-ID: <046342db-07ed-476e-875e-468d8b576a21@y1g2000pra.googlegroups.com>
Source record: 3827
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

On Nov 27, 5:00 pm, Telstar Electronics <briangrif...@sbcglobal.net>
wrote:
> > I bet they don't have a link to your site;c)
> > Steve H
>
> That's entirely up to them...www.telstar-electronics.com

So did Mouser assist you in the design, or put up money to market you
splatter circuit? Do they get a cut of your business? Do they sell
your junk in their catalog? Or is your only partnership just that you
order parts from them? Do they even know what you order parts for?

Partner with Mouser, yeah right, just more telestar hype.

# 1991. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 06:22:38 UTC
From: an_old_friend <konstans@hotmail.com>
Message-ID: <8ec96ed1-1db9-4307-987d-5f47bb4bc503@j32g2000yqn.googlegroups.com>
Source record: 3828
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

On Nov 28, 11:12 pm, cmdr buzz corey <cmdr-buzz-co...@mailcity.com>
wrote:
>
te a life oh cancelled cartoon buy his product if you want it or not
if you don't

# 1992. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 14:44:33 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <190175b5-13d0-4767-9d43-4adb2874f545@20g2000yqt.googlegroups.com>
Source record: 3829
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

> So did Mouser assist you in the design, or put up money to market you
> splatter circuit? Do they get a cut of your business? Do they sell
> your junk in their catalog? Or is your only partnership just that you
> order parts from them? Do they even know what you order parts for?
> Partner with Mouser, yeah right, just more telestar hype.

Commander... Like I said earlier... the dictionary defines partner as
"One that is united or associated
with another or others in an activity or a sphere of common interest."
I guess you're not able to comprehend that sentence. Not really
surprising. If you're looking for an argument... I only argue with
worthwhile adversaries... lol

# 1993. CQ-TV Magazine article needed from issues 132 and 133

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 19:21:34 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <aPCdnfPoHtKtC6zUnZ2dnUVZ_j-dnZ2d@posted.cpinternet>
Source record: 3830

Greetings,

CQ-TV Magazine published an article in several parts entitled "Modifying the Sony HVS2000 video mixer"
sometime before 1997, in issues 132 and 133 (years not known); I would appreciate scans of this
article from someone who has those issues.

Many thanks,

Michael

# 1994. Re: CQ-TV Magazine article needed from issues 132 and 133

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 19:27:52 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <dNydnShIWt44CqzUnZ2dnUVZ_rvinZ2d@posted.cpinternet>
Source record: 3831

msg wrote:

> Greetings,
>
> CQ-TV Magazine published an article in several parts entitled "Modifying
> the Sony HVS2000 video mixer"
> sometime before 1997, in issues 132 and 133 (years not known); I would
> appreciate scans of this
> article from someone who has those issues.

Thought I'd reply to myself after a bit more diggin online; I discovered
an archive of CQ-TV issues online at http://www.batc.org.uk/cq-tv/archive/

I am downloading the two issues and will report if the article is indeed
found within.

Michael

# 1995. Re: CQ-TV Magazine article needed from issues 132 and 133

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 19:50:16 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <kbednf1-UdB4AazUnZ2dnUVZ_qadnZ2d@posted.cpinternet>
Source record: 3832

msg wrote:

> msg wrote:
>
>> Greetings,
>>
>> CQ-TV Magazine published an article in several parts entitled
>> "Modifying the Sony HVS2000 video mixer"
>> sometime before 1997, in issues 132 and 133 (years not known); I would
>> appreciate scans of this
>> article from someone who has those issues.
>
>
> Thought I'd reply to myself after a bit more diggin online; I discovered
> an archive of CQ-TV issues online at http://www.batc.org.uk/cq-tv/archive/
>
> I am downloading the two issues and will report if the article is indeed
> found within.
>

Indeed, it is there. I was initially confused by the title of the
publication, expecting that it was an offshoot of "CQ Magazine" but indeed no,
it is a British ATV publication and thankfully fully archived at the above site.

Michael

# 1996. Sony HVS-2000 luma keyer (used in ATV projects) svc manual or schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 19:58:34 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <rdKdnUY-yLFKA6zUnZ2dnUVZ_gWdnZ2d@posted.cpinternet>
Source record: 3833

On the off chance that a reader of this newsgroup has worked with
the Sony HVS-2000 luma keyer and has the manual with schematics,
I would appreciate some scans ;) (I am aware of commercial manual
sellers online who list the service manual, one of which offers
a pdf version; has anyone seen that one?)

Many thanks,

Michael

# 1997. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 21:34:31 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <00da575c-7189-4369-8eed-bc0b7a9ea78f@t11g2000yqg.googlegroups.com>
Source record: 3834
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

On Nov 29, 9:44 am, Telstar Electronics <briangrif...@sbcglobal.net>
wrote:
> > So did Mouser assist you in the design, or put up money to market you
> > splatter circuit? Do they get a cut of your business? Do they sell
> > your junk in their catalog? Or is your only partnership just that you
> > order parts from them? Do they even know what you order parts for?
> > Partner with Mouser, yeah right, just more telestar hype.
>
> Commander... Like I said earlier... the dictionary defines partner as
> "One that is united or associated
> with another or others in an activity or a sphere of common interest."
> I guess you're not able to comprehend that sentence. Not really
> surprising. If you're looking for an argument... I only argue with
> worthwhile adversaries... lol

Perhaps Mouser should be informed of this claim to partnership. They
may very interested.

Jimmie

# 1998. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 22:42:06 UTC
From: Steve <moparholic@hotmail.com>
Message-ID: <20081129174111.728$gv@newsreader.com>
Source record: 3835
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

JIMMIE <jimmie68@gmail.com> wrote:
> On Nov 29, 9:44=A0am, Telstar Electronics <briangrif...@sbcglobal.net>
> wrote:
> > > So did Mouser assist you in the design, or put up money to market you
> > > splatter circuit? Do they get a cut of your business? Do they sell
> > > your junk in their catalog? Or is your only partnership just that you
> > > order parts from them? Do they even know what you order parts for?
> > > Partner with Mouser, yeah right, just more telestar hype.
> >
> > Commander... Like I said earlier... the dictionary defines partner as
> > "One that is united or associated
> > with another or others in an activity or a sphere of common interest."
> > I guess you're not able to comprehend that sentence. Not really
> > surprising. If you're looking for an argument... I only argue with
> > worthwhile adversaries... lol
>
> Perhaps Mouser should be informed of this claim to partnership. They
> may very interested.
>
> Jimmie
>
Oh no, are you going to report him to Mouser?

--
http://NewsReader.Com/

# 1999. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 23:23:21 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0811292318210.22660@sdf.lonestar.org>
Source record: 3836
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

On Sat, 29 Nov 2008, JIMMIE wrote:

> Date: Sat, 29 Nov 2008 13:34:31 -0800 (PST)
> From: JIMMIE <jimmie68@gmail.com>
> Newsgroups: rec.radio.amateur.homebrew, rec.radio.cb,
> rec.radio.amateur.equipment
> Subject: Re: VoiceMax Speech Processor
>
> On Nov 29, 9:44 am, Telstar Electronics <briangrif...@sbcglobal.net>
> wrote:
>>> So did Mouser assist you in the design, or put up money to market you
>>> splatter circuit? Do they get a cut of your business? Do they sell
>>> your junk in their catalog? Or is your only partnership just that you
>>> order parts from them? Do they even know what you order parts for?
>>> Partner with Mouser, yeah right, just more telestar hype.
>>
>> Commander... Like I said earlier... the dictionary defines partner as
>> "One that is united or associated
>> with another or others in an activity or a sphere of common interest."
>> I guess you're not able to comprehend that sentence. Not really
>> surprising. If you're looking for an argument... I only argue with
>> worthwhile adversaries... lol
>
> Perhaps Mouser should be informed of this claim to partnership. They
> may very interested.
>
> Jimmie
>

Maybe not "informed" but ask people THERE, at Mouser, what their
"definition" of _partner_ is and then tell them about this guy.

"Dictionary" definitions should not be confused with word usage within
contexts that alter the meaning of words. For example, the word
_sterilize_ has a different meaning in banking/finance compared to
microbiology.

In a business context, "partners" generally implies that an ongoing
relationship exists by virtue of a written contract. If party A buys parts
from party B, and pays for those parts with money, that establishes a
provider-customer relationship, not a partnership.

# 2000. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-29 23:29:31 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0811292329230.22660@sdf.lonestar.org>
Source record: 3837
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Wed, 26 Nov 2008, Rectifier wrote:

> Date: Wed, 26 Nov 2008 12:56:20 -0600
> From: Rectifier <redgranite_2000@yahoo.com>
> Newsgroups: rec.radio.cb, rec.radio.amateur.homebrew,
> rec.radio.amateur.equipment
> Subject: Re: VoiceMax Speech Processor
>
>
> "cmdr buzz corey" <cmdr-buzz-corey@mailcity.com> wrote in message
> news:10048f70-225e-4ba3-acee-632151f1ac30@z28g2000prd.googlegroups.com...
>> On Nov 14, 5:13 am, Telstar Electronics <briangrif...@sbcglobal.net>
>> wrote:
>>> The VoiceMax speech processor is not for everyone...
>>> It's only for radio operators that want maximum range from their rig.
>>
>> Along with maximum splatter.
>
>
> LOL.
>
> His website claims that Mouser Electronics is a "partner." Searches on
> Mouser for "Telstar" and "VoiceMax" return zero results. Hmm. . does buying
> some parts from Mouser make them a "partner." If so, I'm a "partner" with
> Mouser, too.
>
> LOL
>
> LOL
>

I have their 2008 sept-oct catalog and "Telstar" is not listed in the
supplier index at the end.

Does Telstar provide any kind of study data that defines what "maximum
range from their rig" actually means?

And documents that the processor actually does something measurably
beneficial at the receive end?

# 2001. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 00:29:28 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <64be9677-e7b2-4152-a4dc-f3c2db8730fa@20g2000yqt.googlegroups.com>
Source record: 3838
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

On Nov 29, 5:42 pm, Steve <moparho...@hotmail.com> wrote:
> JIMMIE <jimmi...@gmail.com> wrote:
> > On Nov 29, 9:44=A0am, Telstar Electronics <briangrif...@sbcglobal.net>
> > wrote:
> > > > So did Mouser assist you in the design, or put up money to market you
> > > > splatter circuit? Do they get a cut of your business? Do they sell
> > > > your junk in their catalog? Or is your only partnership just that you
> > > > order parts from them? Do they even know what you order parts for?
> > > > Partner with Mouser, yeah right, just more telestar hype.
>
> > > Commander... Like I said earlier... the dictionary defines partner as
> > > "One that is united or associated
> > > with another or others in an activity or a sphere of common interest."
> > > I guess you're not able to comprehend that sentence. Not really
> > > surprising. If you're looking for an argument... I only argue with
> > > worthwhile adversaries... lol
>
> > Perhaps Mouser should be informed of this claim to partnership. They
> > may very interested.
>
> > Jimmie
>
> Oh no, are you going to report him to Mouser?
>
> --
>                  http://NewsReader.Com/- Hide quoted text -
>
> - Show quoted text -

The last I heard a partnership required a legal agreement between two
or more parties agreeing to be parters. It may be a case of the powers
that be at Mouser asking themselves "Can I make more money off of
Telstar by doing business with or by taking legal actioon against
Telstar".

I once had a similar complaint lodged against me when I had my own
business because my sign and letterhead read ....serving in
partnership with a well known electronics supply firm. I manage to get
away with it because they had sent me a letter after I had opened my
account with them stating how they "anticipated serving in partnership
with my business". I had based my shingle on this quote.

Jimmie

# 2002. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 01:58:43 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B65CB3B5C2D52MDWN@194.177.96.78>
Source record: 3839
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

There are no federal laws in the USA governing partnerships.
It may be covered by some state law where Mouser is incorporated.
The issue is trademark infringement. Something most companies
take quite seriously.

Stray Dog <sdog2008@sdf.lonestar.org> wrote in
news:Pine.NEB.4.64.0811292318210.22660@sdf.lonestar.org:

>
> On Sat, 29 Nov 2008, JIMMIE wrote:
>
>> Date: Sat, 29 Nov 2008 13:34:31 -0800 (PST)
>> From: JIMMIE <jimmie68@gmail.com>
>> Newsgroups: rec.radio.amateur.homebrew, rec.radio.cb,
>> rec.radio.amateur.equipment
>> Subject: Re: VoiceMax Speech Processor
>>
>> On Nov 29, 9:44 am, Telstar Electronics <briangrif...@sbcglobal.net>
>> wrote:
>>>> So did Mouser assist you in the design, or put up money to market
>>>> you splatter circuit? Do they get a cut of your business? Do they
>>>> sell your junk in their catalog? Or is your only partnership just
>>>> that you order parts from them? Do they even know what you order
>>>> parts for? Partner with Mouser, yeah right, just more telestar
>>>> hype.
>>>
>>> Commander... Like I said earlier... the dictionary defines partner
>>> as "One that is united or associated
>>> with another or others in an activity or a sphere of common
>>> interest." I guess you're not able to comprehend that sentence. Not
>>> really surprising. If you're looking for an argument... I only argue
>>> with worthwhile adversaries... lol
>>
>> Perhaps Mouser should be informed of this claim to partnership. They
>> may very interested.
>>
>> Jimmie
>>
>
> Maybe not "informed" but ask people THERE, at Mouser, what their
> "definition" of _partner_ is and then tell them about this guy.
>
> "Dictionary" definitions should not be confused with word usage within

> contexts that alter the meaning of words. For example, the word
> _sterilize_ has a different meaning in banking/finance compared to
> microbiology.
>
> In a business context, "partners" generally implies that an ongoing
> relationship exists by virtue of a written contract. If party A buys
> parts from party B, and pays for those parts with money, that
> establishes a provider-customer relationship, not a partnership.

## 2003. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 02:53:05 UTC
From: Steve <moparholic@hotmail.com>
Message-ID: <20081129215210.672$0g@newsreader.com>
Source record: 3840
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

JIMMIE <jimmie68@gmail.com> wrote:
<snip>
> I had based my shingle on this quote.
>
> Jimmie
>
I hear you Jimmie, the simple fact is Brian uses google to cross post/spew
his product. As far as I know they don't give a flying rats ass about
usenet abuse.

I say no one is buying it anyway so let Brian carry on from his parents
basement. No harm no foul.

--
http://NewsReader.Com/

## 2004. Re: Hellenedyne: a new type of regen-reflex radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 05:08:51 UTC
From: just_rtfm@yahoo.com
Message-ID: <88e31052-a3ab-4de1-9789-98eb844916a7@20g2000yqt.googlegroups.com>
Source record: 3841

hi n8zu!

you're very welcome. sorry for the late response: i'm not on usenet
much. wow your supply idea is great. btw, i posted a more reproducible
version of the Hellenedyne and some related PDFs:

http://home.comcast.net/~phils_radio_designs/

regards,
phil :)

# 2005. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 07:57:19 UTC
From: an_old_friend <konstans@hotmail.com>
Message-ID: <4b4115ee-39f2-4e2f-824a-9c504bab9d18@o2g2000yqd.googlegroups.com>
Source record: 3842
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

On Nov 29, 9:53 pm, Steve <moparho...@hotmail.com> wrote:
> JIMMIE <jimmi...@gmail.com> wrote:
>
> <snip>> I had based my shingle on this quote.
>
> > Jimmie
>
> I hear you Jimmie, the simple fact is Brian uses google to cross post/spew
> his product. As far as I know they don't give a flying rats ass about
> usenet abuse.
>
> I say no one is buying it anyway so let Brian carry on from his parents
> basement. No harm no foul.

the problem is certainly guy seem to have a case of OCD concernign him
and he uses them to ppormote his product a nice way of making
lemonaide of that problem

# 2006. Old Practical Wireless article wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 09:27:11 UTC
From: ronayling@hotmail.com
Message-ID: <5ca58f68-a145-4b32-abf3-f4e308af1d38@z1g2000yqn.googlegroups.com>
Source record: 3843

Hi, I'm looking for an article that was in an old Practical Wireless magazine about early to mid 50's it was about a simple two valve HF transmitter, it was unusual as the chassis was made of Hardboard!! I'd very much appreciate a scan if anyone can find it, or possible an idea of the month and year of the article, thanks from Ron G3YUH...

## 2007. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 16:52:09 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <2c347ec8-5acd-4c17-8ec9-f6457140e91b@t2g2000yqm.googlegroups.com>
Source record: 3844
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

> Perhaps Mouser should be informed of this claim to partnership. They
> may very interested.
> Jimmie

Yes Jimmie-boy... I think you should alert them immediately... lol
www.telstar-electronics.com

# 2008. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 22:01:37 UTC
From: kb9rqz@yahoo.com
Message-ID: <u836j4db2v49muee1441f0tj95hhnsv5a9@4ax.com>
Source record: 3846
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

On Sun, 30 Nov 2008 08:52:09 -0800 (PST), Telstar Electronics
<briangriffey@sbcglobal.net> wrote:

>> Perhaps Mouser should be informed of this claim to partnership. They
>> may very interested.
>> Jimmie
>
>Yes Jimmie-boy... I think you should alert them immediately... lol
>www.telstar-electronics.com

I don't personaly see much need for your product but I do enjoy the
way you make lemonaide of your detractors

"one useless man is disgrace 2 become a law firm 3 or more become a congress"
adams

woger you are a Congress all in your own head

http://kb9rqz.bravejournal.com/
altopia is never used by KB9RQZ
nor is Konstans@hotmail.com ever
btw i can be found at
17366 N River Rd
Chassel Mi

but the cowards asking lack the gut to act
** Posted from http://www.teranews.com **

# 2009. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-11-30 22:38:33 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <648df768-0d81-40d7-972e-027e18c6571b@l42g2000yqe.googlegroups.com>
Source record: 3845

On Nov 29, 8:58 pm, Grumpy The Mule <s_foo...@foo.bar> wrote:
> There are no federal laws in the USA governing partnerships.
> It may be covered by some state law where Mouser is incorporated.
> The issue is trademark infringement.  Something most companies
> take quite seriously.
>
> Stray Dog <sdog2...@sdf.lonestar.org> wrote
innews:Pine.NEB.4.64.0811292318210.22660@sdf.lonestar.org:
>
>
>
>
>
> > On Sat, 29 Nov 2008, JIMMIE wrote:
>
> >> Date: Sat, 29 Nov 2008 13:34:31 -0800 (PST)
> >> From: JIMMIE <jimmi...@gmail.com>
> >> Newsgroups: rec.radio.amateur.homebrew, rec.radio.cb,
> >>     rec.radio.amateur.equipment
> >> Subject: Re: VoiceMax Speech Processor
>
> >> On Nov 29, 9:44 am, Telstar Electronics <briangrif...@sbcglobal.net>
> >> wrote:
> >>>> So did Mouser assist you in the design, or put up money to market
> >>>> you splatter circuit? Do they get a cut of your business? Do they
> >>>> sell your junk in their catalog? Or is your only partnership just
> >>>> that you order parts from them? Do they even know what you order
> >>>> parts for? Partner with Mouser, yeah right, just more telestar
> >>>> hype.
>
> >>> Commander... Like I said earlier... the dictionary defines partner
> >>> as "One that is united or associated
> >>> with another or others in an activity or a sphere of common
> >>> interest." I guess you're not able to comprehend that sentence. Not
> >>> really surprising. If you're looking for an argument... I only argue
> >>> with worthwhile adversaries... lol
>
> >> Perhaps Mouser should be informed of this claim to partnership. They
> >> may very interested.
>
> >> Jimmie
>
> > Maybe not "informed" but ask people THERE, at Mouser, what their
> > "definition" of _partner_ is and then tell them about this guy.

>
> > "Dictionary" definitions should not be confused with word usage within
> > contexts that alter the meaning of words. For example, the word
> > _sterilize_ has a different meaning in banking/finance compared to
> > microbiology.
>
> > In a business context, "partners"  generally implies that an ongoing
> > relationship exists by virtue of a written contract. If party A buys
> > parts from party B, and pays for those parts with money, that
> > establishes a provider-customer relationship, not a partnership.- Hide quoted text -
>
> - Show quoted text -

Trademark infrindgement was there complaint against me. I was young
and more foolish than I am now and thought the little blurb on my
shingle would be funny and no one would even notice. They noticed and
didnt think my humor was that funny. For me it only took about 10
minutes and some black paint to remedy the problem.

Jimmie

## 2010. Females love to show off in front of their webcams

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-01 15:03:25 UTC
From: elvinabr@gmail.com
Message-ID: <b8ce10db-378c-4ac2-81a5-f4fb023239ac@f3g2000yqf.googlegroups.com>
Source record: 3847
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Females love webcams http://westsex.withsex.com

## 2011. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-01 17:25:21 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <2a6063fd-4cde-4a57-b2ae-49dc10b827f4@r40g2000yqj.googlegroups.com>
Source record: 3848

On Nov 27, 1:30 am, Tim Wescott <t...@seemywebsite.com> wrote:
> I don't have a lot of reference material to look at, but I don't think
> that using a crystal's overtones to generate RF really picked up until
> the 50's (it was probably done during WW-II, but I only see it put forth
> as a common method starting with my '50's ARRL handbooks).

In 1930's QST's it's not too uncommon to see neophytes warned that crystals will often oscillate on something other than their marked frequency. They didn't call this overtone operation, though.

BC-604's (WWII era) start with a ridiculously low crystal (400ish kHz) frequency and multiply up but I think the reason for this is more to do with FM deviation than anything else. ("Armstrong method"?) For many decades, broadcast FM stations similarly started with low crystal frequencies and multiplied up.

Tim.

# 2012. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-01 18:06:28 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6pine3F85uioU1@mid.individual.net>
Source record: 3849

Tim Shoppa wrote:

> In 1930's QST's it's not too uncommon to see neophytes warned that
> crystals will often oscillate on something other than their marked
> frequency. They didn't call this overtone operation, though.

They /might/ be suggesting that frequency can change with loading. I find that some of the reference crystals I use are quite some way off their marked frequency when given capacitive loading that differs from that recommended by the manufacturers!

> BC-604's (WWII era) start with a ridiculously low crystal (400ish kHz)
> frequency and multiply up but I think the reason for this is more to
> do with FM deviation than anything else. ("Armstrong method"?) For
> many decades, broadcast FM stations similarly started with low crystal
> frequencies and multiplied up.

Some of the broadcast transmitters I worked on 25 years ago used this method for FM, and were /really/ difficult to line up! They also included complex circuitry for the required "pre-distortion" of the audio to compensate for the non-linear deviation you got out of a crystal oscillators. Some manufacturers tried to overcome the distortion issue by using phase modulation and the "right" audio curves, but these required even more stages of multiplication!

One of my earliest jobs as a broadcast transmitter engineer was to develop a PLL to replace the horrible multiplier chains in some of these transmitters. I used (normally) either half or quarter frequency generation, and used the last one or two multiplier stages. The CMOS PLL circuitry could be prone to bizarre effects with high field strengths, so they were built in sealed diecast boxes, and the lower frequency generation meant that the high power output stages were unlikely to couple back into the oscillator!

Bob

## 2013. Re: Females love to show off in front of their webcams

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-01 21:47:04 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <zVYYk.2602$UI2.2449@bignews6.bellsouth.net>
Source record: 3850
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

If they're not talking on ham radio, we're not interested.

Ed, N2ECW

---

<elvinabr@gmail.com> wrote in message
news:b8ce10db-378c-4ac2-81a5-f4fb023239ac@f3g2000yqf.googlegroups.com...
> Females love webcams http://westsex.withsex.com

# 2014. Re: Females love to show off in front of their webcams

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 00:08:17 UTC
From: Eagle@bellsouth.net
Message-ID: <49347c37.40462203@newsgroups.bellsouth.net>
Source record: 3601
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

On Mon, 1 Dec 2008 16:47:04 -0500, "Ed Cregger"
<ecregger@bellsouff.net> wrote:

>If they're not talking on ham radio, we're not interested.
>
>Ed, N2ECW

Concur.

Hugh, WA4QZU
>
>-------
>
><elvinabr@gmail.com> wrote in message
>news:b8ce10db-378c-4ac2-81a5-f4fb023239ac@f3g2000yqf.googlegroups.com...
>> Females love webcams http://westsex.withsex.com
>
>

## 2015. uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 04:27:52 UTC
From: "Ross, NS7F" <rjtucke@gmail.com>
Message-ID: <cf368a30-7a6e-49cb-b403-15d3c5bb1759@l33g2000pri.googlegroups.com>
Source record: 3602

Dear List,
I am looking for your wisdom and lore regarding uses for some of the more exotic capacitors found in my junque-box. I have been a ham for a whole sunspot cycle now. I know what an NP0/C0G capacitor is and when to use it, I know electrolytics, tantalum, and about the use of Temperature Compensating capacitors. I have checked the usual places (books, ARRL TIS, the archives of this list, etc) and none of these resources tell me several important things: what they look like and where would I use them in ham homebrew circuits. Here is my list:

UNKNOWN TYPE AND APPLICATION:
1. Blue, really shiny, flat, and small like a disc ceramic.

2. Orange and shiny- definitely not electrolytic or tantalum. Both bulgy and flattish.

3. Green and shiny- both bulgy and flattish. (I've heard these are either mylar or polyester film. How do I tell them apart?)

4. Dark orange (maybe brownish?) and bulgy.

5. Yellow rectangular blocks.

KNOWN TYPE, UNKNOWN APPLICATION
6. Labeled "monolithic dip"- what do I use these for?

7. "Mallory DC Film" (250V)- what do I use these for?

8. What's the difference between the following three types of mica capacitors?
* Dipped silver mica
* Old-style micas (colored dots and physically large rectangular blocks)
* Modern, not dipped-silver micas

Thank you VERY much for any input on this matter.

73,
Ross, NS7F

## 2016. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 06:22:49 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B683DCE1CDB2MDWN@194.177.96.78>
Source record: 3603

Howdy,

Without seeing the parts I can only take a WAG at what the
capacitors in question might be. This web site might help.
http://www.faradnet.com/

> UNKNOWN TYPE AND APPLICATION:
> 1. Blue, really shiny, flat, and small like a disc ceramic.

Possibly Murata (or others) ceramic capacitors designed for
use in AC line filters.

> 2. Orange and shiny- definitely not electrolytic or tantalum. Both
> bulgy and flattish.

Possibly Sprage Orange drop polypropylene film capacitors. There are
various types in this product family. Generally good for high dV/dT
or pulse current applications like snubbers. Could be metallized film
or film and foil.

> 3. Green and shiny- both bulgy and flattish. (I've heard these are
> either mylar or polyester film. How do I tell them apart?)

I think this is a good guess. Mylar is a polyester film.

> 4. Dark orange (maybe brownish?) and bulgy.

Another film capacitor. If brown possibly Panasonic polyester.

> 5. Yellow rectangular blocks.

It's a film capacitor, Possibly Wima. I can't remember what the
material is. Could be Philips polyester too.

> KNOWN TYPE, UNKNOWN APPLICATION
> 6. Labeled "monolithic dip"- what do I use these for?

General low energy use, coupling, by pass and filtering.

> 7. "Mallory DC Film" (250V)- what do I use these for?

Polypropylene, bypass or noise suppression.

> 8. What's the difference between the following three types of mica
> capacitors?

> * Dipped silver mica
> * Old-style micas (colored dots and physically large rectangular
> blocks)

> * Modern, not dipped-silver micas

Dipped mica is still made and good for RF coupling and snubbers. I use these in antenna tuners.

The box type with dots are similar construction but with metal plates instead of metalization. They're good for RF coupling and high current like tank circuits.

The non-dipped I'm guessing Unelco metal clad which are more like the box style without the box. Less series inductance so better high frequency performance. I've used these in solid state linears up into the VHF range.

The film capacitors vary in the material, polyester (mylar) polyproylene, polycarbonate, polystyrene and more exotic films like polysulphone...each has its strong and weak points. Some use mixed dielectrics. The construction can be metalized film, metal foil, double layer (self healing) or stacked film. The method for attachment of the lead wires may vary too with high current capacitors having thicker termination or schouping (sp?) metal sprayed onto the ends of the foil or film. The Farad Net site documents some of the types and applications.

As always YMMV. I'm just guessing.

73,
Grumpy

# 2017. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 11:24:52 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gh35u70tc@news3.newsguy.com>
Source record: 3604

Grumpy The Mule wrote:
> Howdy,
>
>
> Without seeing the parts I can only take a WAG at what the
> capacitors in question might be. This web site might help.
> http://www.faradnet.com/
>
>> UNKNOWN TYPE AND APPLICATION:
>> 1. Blue, really shiny, flat, and small like a disc ceramic.
>
> Possibly Murata (or others) ceramic capacitors designed for
> use in AC line filters.

I'll add my cents worth.
A few years ago I bought some high-voltage disc ceramics like you are describing. 6kv rating in 'rf' values like "681" (680pf). About 10mm in diameter and 5cm thick. The 1kv ones are about half that size.

I used them in the output pi-network loading of a Galaxy 5 and they were up to the task although they are plain Z5U types.

They are marked, btw, no mystery as to their rating. You don't normally look at something this small and think 6kv!

-Bill

# 2018. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 16:32:44 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <5054e888-a57e-4208-ae70-74228e3bd48c@13g2000yql.googlegroups.com>
Source record: 3605

On Dec 1, 11:27 pm, "Ross, NS7F" <rjtu...@gmail.com> wrote:
> Dear List,
> I am looking for your wisdom and lore regarding uses for some of the
> more exotic capacitors found in my junque-box. I have been a ham for a
> whole sunspot cycle now. I know what an NP0/C0G capacitor is and when
> to use it, I know electrolytics, tantalum, and about the use of
> Temperature Compensating capacitors. I have checked the usual places
> (books, ARRL TIS, the archives of this list, etc) and none of these
> resources tell me several important things: what they look like and
> where would I use them in ham homebrew circuits. Here is my list:
>
> UNKNOWN TYPE AND APPLICATION:
> 1. Blue, really shiny, flat, and small like a disc ceramic.

Probably is a disc ceramic :-). Some makers use blue on their higher-
voltage disk ceramics. Labeling will probably tell voltage and
capacitance.

> 2. Orange and shiny- definitely not electrolytic or tantalum. Both
> bulgy and flattish.
>
> 3. Green and shiny- both bulgy and flattish. (I've heard these are
> either mylar or polyester film. How do I tell them apart?)
>
> 4. Dark orange (maybe brownish?) and bulgy.
>
> 5. Yellow rectangular blocks.

All of the above are probably film capacitors of some kind or another.
Color doesn't mean much except maybe to an audiofile.

> KNOWN TYPE, UNKNOWN APPLICATION
> 6. Labeled "monolithic dip"- what do I use these for?

Widely used ceramic capacitors. Small values are good for RF, larger
for bypass. Depending on the dielectric may not be worthwhile for
audio.

> 7. "Mallory DC Film" (250V)- what do I use these for?

These are higher voltage film polypropylene capacitors.
>
> 8. What's the difference between the following three types of mica
> capacitors?
> * Dipped silver mica
> * Old-style micas (colored dots and physically large rectangular

> blocks)
> * Modern, not dipped-silver micas

All are potentially useful where you need a low-dissipation capacitor. The old-style micas less so. Sometimes even if it's a rectangular package with colored dots, they are just ceramic and not micas.

For many modern purposes, modern C0G ceramics will be superior (better lower tempco) to the long-recommended silver micas.

Tim N3QE

# 2019. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 17:29:14 UTC
From: John Navas <spamfilter1@navasgroup.com>
Message-ID: <gsraj4lelo15685lhiaet0p5nf2riut5a6@4ax.com>
Source record: 3606
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

On Fri, 21 Nov 2008 09:00:09 -0500, "Bill Kearney"
<wkearney99@hotmail.com> wrote in
<FfCdnaXCtoZ3I7vUnZ2dnUVZ_gydnZ2d@speakeasy.net>:

>"DaveC" <me@bogusdomain.net> wrote in message
>news:0001HW.C54BA58A0075A070B01AD9AF@news.sf.sbcglobal.net...

>> Is there any reason to not go for the greatest gain antenna, given that
>> cost is not too important (within reason)?
>
>Alligator effect. Wide mouth receiving everything.

"Alligator effect" normally refers to higher transmit power (not higher
antenna gain) -- big mouth, small ears.

>If you don't need to
>pickup everything then why bother? It just makes it harder for your WiFi
>router to cut through all the noise of distant stations it doesn't
>communicate with. ...

It actually usually makes sense, since higher gain means narrower
receive pattern, which better rejects off-axis interference.
Interference in exactly the same path is possible but unlikely.
--
Best regards, FAQ for Wireless Internet: <http://wireless.navas.us>
John Navas FAQ for Wi-Fi: <http://wireless.navas.us/wiki/Wi-Fi>
Wi-Fi How To: <http://wireless.navas.us/wiki/Wi-Fi_HowTo>
Fixes to Wi-Fi Problems: <http://wireless.navas.us/wiki/Wi-Fi_Fixes>

## 2020. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 18:18:32 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <xu2dnbdgg4W24ajUnZ2dnUVZ8uudnZ2d@pipex.net>
Source record: 3607

exray wrote:
> Grumpy The Mule wrote:
>> Howdy,
>>
>>
>> Without seeing the parts I can only take a WAG at what the
>> capacitors in question might be. This web site might help.
>> http://www.faradnet.com/
>>
>>> UNKNOWN TYPE AND APPLICATION:
>>> 1. Blue, really shiny, flat, and small like a disc ceramic.
>>
>> Possibly Murata (or others) ceramic capacitors designed for
>> use in AC line filters.
>
> I'll add my cents worth.
> A few years ago I bought some high-voltage disc ceramics like you are
> describing. 6kv rating in 'rf' values like "681" (680pf). About 10mm
> in diameter and 5cm thick. The 1kv ones are about half that size.
>
> I used them in the output pi-network loading of a Galaxy 5 and they were
> up to the task although they are plain Z5U types.
>
> They are marked, btw, no mystery as to their rating. You don't normally
> look at something this small and think 6kv.
==========
They might be OK capacity and voltage wise ,but are possibly not
suitable to handle RF current ,so when using them in HV RF circuits it
might be better to use a few in parallel.

Frank KN6WH

## 2021. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-02 19:03:38 UTC
From: exray <radioexray@geeemail.com>
Message-ID: <gh40qb0k0e@news3.newsguy.com>
Source record: 3608

highlandham wrote:

> They might be OK capacity and voltage wise ,but are possibly not
> suitable to handle RF current ,so when using them in HV RF circuits it
> might be better to use a few in parallel.
>
> Frank KN6WH

That may well be true but thats also why I stated a case of a 200-watt
output rig where they DID work.

-Bill

# 2022. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-03 21:51:53 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <7ed1b40c-3269-4713-a1ea-a4b1e2a72a6e@l39g2000yqn.googlegroups.com>
Source record: 3609
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

On Nov 29, 5:42 pm, Steve <moparho...@hotmail.com> wrote:
> JIMMIE <jimmi...@gmail.com> wrote:
> > On Nov 29, 9:44=A0am, Telstar Electronics <briangrif...@sbcglobal.net>
> > wrote:
> > > > So did Mouser assist you in the design, or put up money to market you
> > > > splatter circuit? Do they get a cut of your business? Do they sell
> > > > your junk in their catalog? Or is your only partnership just that you
> > > > order parts from them? Do they even know what you order parts for?
> > > > Partner with Mouser, yeah right, just more telestar hype.
>
> > > Commander... Like I said earlier... the dictionary defines partner as
> > > "One that is united or associated
> > > with another or others in an activity or a sphere of common interest."
> > > I guess you're not able to comprehend that sentence. Not really
> > > surprising. If you're looking for an argument... I only argue with
> > > worthwhile adversaries... lol
>
> > Perhaps Mouser should be informed of this claim to partnership. They
> > may very interested.
>
> > Jimmie
>
> Oh no, are you going to report him to Mouser?
>
> --
> http://NewsReader.Com/

Hey OM

well I tell you what let's say a certain company is running
racketeering like some big electronics firm.
This racket involves taking peoples money and laundering it then
giving it back after it's been laundered. Now lets say you partnered
with this company then you too would be guilty of racketeering which
under RICO laws is a felony.

So in the end your so called definition of partner would fall under
the guise of RICO and you will go to jail for a real long time and
your best friend in jail will be bubba.

In other words your guilty by association.

73 OM

n8zu

## 2023. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-03 23:40:33 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812032329080.21666@sdf.lonestar.org>
Source record: 3610

On Mon, 1 Dec 2008, Ross, NS7F wrote:

> Date: Mon, 1 Dec 2008 20:27:52 -0800 (PST)
> From: "Ross, NS7F" <rjtucke@gmail.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: uses for exotic capacitor types?
>
> Dear List,
> I am looking for your wisdom and lore regarding uses for some of the
> more exotic capacitors found in my junque-box. I have been a ham for a
> whole sunspot cycle now. I know what an NP0/C0G capacitor is and when
> to use it, I know electrolytics, tantalum, and about the use of
> Temperature Compensating capacitors. I have checked the usual places
> (books, ARRL TIS, the archives of this list, etc) and none of these
> resources tell me several important things: what they look like and
> where would I use them in ham homebrew circuits. Here is my list:
>
> UNKNOWN TYPE AND APPLICATION:
> 1. Blue, really shiny, flat, and small like a disc ceramic.
>
> 2. Orange and shiny- definitely not electrolytic or tantalum. Both
> bulgy and flattish.
>
> 3. Green and shiny- both bulgy and flattish. (I've heard these are
> either mylar or polyester film. How do I tell them apart?)
>
> 4. Dark orange (maybe brownish?) and bulgy.
>
> 5. Yellow rectangular blocks.
>
> KNOWN TYPE, UNKNOWN APPLICATION
> 6. Labeled "monolithic dip"- what do I use these for?
>
> 7. "Mallory DC Film" (250V)- what do I use these for?
>
> 8. What's the difference between the following three types of mica
> capacitors?
> * Dipped silver mica

Capacitance should be more stable with temperature change.

> * Old-style micas (colored dots and physically large rectangular
> blocks)

Cheaper than silver mica.

> * Modern, not dipped-silver micas

Should be larger (?) and more for higher currents (RF) and maybe
voltages.

Micas should be very resistant to the kind of ageing in paper dielectric
caps (leakage, change in value, short, open). And, also, some capacitors,
such as electrolytics have capacitance changes as a function of voltage
applied, and thus are very non-linear.

> Thank you VERY much for any input on this matter.

If this is important to you, then it would have been more helpful to us if
you gave some specific dimensions of an example or two, and described any
writing or other markings (such as bands, "+", "=" ), and voltage and
capacitance numbers or even code numbers. Many new caps don't have
specific characteristics on them any more, just code numbers and you have
to guess or know what they mean.

Another possiblity would be to obtain catalogs, even current catalogs,
from parts suppliers. Often they have pictures or line drawings that can
give you hints.

I don't know about the newest ARRL handbooks, but many of the old ones
have typical pictures of examples and you can go by that.

Be aware that some of the newer caps do not have forms or colors that are
as standardized as they once were and the external appearance might not
give you a good clue as to what you have.

Capacitor color codes (six dots) on the old caps are also "decoded" in
some of the older handbooks.

> 73,
> Ross, NS7F
>

## 2024. icom 7400 ext.spkr socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 03:33:27 UTC
From: doug <doug.morsit@virgin.net>
Message-ID: <3dIZk.1247$gx1.453@newsfe16.ams2>
Source record: 3611

Need to replace or resolder ext. speaker socket on Icom 7400,and wonder if anyone has knowhow on this job. Thanks for any info.!

doug.

# 2025. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 09:36:39 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <3d81a4e0-1c9f-4cd1-81e2-0519fc2018a4@q9g2000yqc.googlegroups.com>
Source record: 3612

On Dec 1, 11:27 pm, "Ross, NS7F" <rjtu...@gmail.com> wrote:
> Dear List,
> I am looking for your wisdom and lore regarding uses for some of the
> more exotic capacitors found in my junque-box. I have been a ham for a
> whole sunspot cycle now. I know what an NP0/C0G capacitor is and when
> to use it, I know electrolytics, tantalum, and about the use of
> Temperature Compensating capacitors. I have checked the usual places
> (books, ARRL TIS, the archives of this list, etc) and none of these
> resources tell me several important things: what they look like and
> where would I use them in ham homebrew circuits. Here is my list:
>
> UNKNOWN TYPE AND APPLICATION:
> 1. Blue, really shiny, flat, and small like a disc ceramic.
>
> 2. Orange and shiny- definitely not electrolytic or tantalum. Both
> bulgy and flattish.
>
> 3. Green and shiny- both bulgy and flattish. (I've heard these are
> either mylar or polyester film. How do I tell them apart?)
>
> 4. Dark orange (maybe brownish?) and bulgy.
>
> 5. Yellow rectangular blocks.
>
> KNOWN TYPE, UNKNOWN APPLICATION
> 6. Labeled "monolithic dip"- what do I use these for?
>
> 7. "Mallory DC Film" (250V)- what do I use these for?
>
> 8. What's the difference between the following three types of mica
> capacitors?
> * Dipped silver mica
> * Old-style micas (colored dots and physically large rectangular
> blocks)
> * Modern, not dipped-silver micas
>
> Thank you VERY much for any input on this matter.
>
> 73,
> Ross, NS7F

Hey OM

I hate to inform you but not one of those is an exotic capacitor. They
are all garden variety.

Now maybe a Russian made 1 farad 28WVDC capacitor the size of an overnight bag that would be exotic.
Since yoiu been a ham for a sunspot cycle maybe you can find sum sun spots in that junque box for me eh? I could use sum sun spots.

73 OM
n8zu

# 2026. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 12:33:01 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <9411fb1f-87c4-4746-b4e6-da5017bb2024@v4g2000yqa.googlegroups.com>
Source record: 3613
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

> well I tell you what let's say a certain company is running
> racketeering like some big electronics firm.
> This racket involves taking peoples money and laundering it then
> giving it back after it's been laundered. Now lets say you partnered
> with this company then you too would be guilty of racketeering  which
> under RICO laws is a felony.
> So in the end your so called definition of partner would fall under
> the guise of RICO and you will go to jail for a real long time and
> your best friend in jail will be bubba.
> In other words your guilty by association.
> n8zu

I had no idea so many attorneys frequented this group... lol

# 2027. Re: Article about a portable PC that runs on 12v?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 13:42:40 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <748d0ebf-83eb-41d6-8471-c1f52b328943@k19g2000yqg.googlegroups.com>
Source record: 3614

On Nov 12, 7:18 pm, Bob <biasco...@invalid.inv> wrote:
> Dan Richardson wrote:
> > On Wed, 12 Nov 2008 00:24:01 +0000, Bob <biasco...@invalid.inv> wrote:
>
> >> can't understand the reluctance of the Americans to use Linux.  There has
> >>been no real reason to use Windows for a long time (unless you want to play
> >>games, but a PS3 is best for that).  Over here in Europe, Linux uptake
> >>continues rapidly - as each new Windows virus or worm hits, ever more people
> >>and businesses migrate.
>
> > Maybe it is because it can be very difficult, if not impossible, to
> > find necessary hardware drivers. Especially, if you have some of the
> > latest equipment models. I have found Linux to be more useful on older
> > computers as one is much more likely to find the necessary drivers.
>
> > For example have recently added a new HP all-in-one laser printer that
> > includes a scanner and FAX. I have it installed on a dual boot
> > (Linux/Windows XP) system. While I'm able to print with the Linux
> > system good luck trying to get the scanner and FAX working. That's
> > just one example. I have a litany of them.
>
> Funnily enough, I have much the same, but found that HPLip handled printing
> perfectly, and Xsane handled scanning.  Hylafax also works very effectively.
> No difficult installation or configuration required with the /very/ latest
> hardware - modern Linux distros have all that pretty much licked!
>
> Just don't buy Canon or Lexmark gear - both companies /actively/ /discourage/
> the development of Linux drivers.
>
> Bob- Hide quoted text -
>
> - Show quoted text -

For an everyday driver I do find putting together a computer using
Linux a bit of a hassle. However for a special purpose computer like a
server I prefer Linux systems. I guess Windows has become the WD40 of
operating systems, its useful for a lot of things but for most special
purposes yo ucan find something better.

Jimmie

# 2028. 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 14:23:48 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <9dcff61e-91dd-4b57-8572-908eb16f4117@t3g2000yqa.googlegroups.com>
Source record: 3615

After years of avoiding morse code I am finally getting into it. the ideal of operating a very simple transmitter appeals to my junkbox/ trashcan construction mentality.
I am looking for a substitue for a 6L6 that has the plate brought out the top. I was trying to build a little Glowbug transmitter but was having all kinds of problems neutralizing the the thing. I think I would have better luck if I can separate the grid and plate circuits from each other. I am considering an 807 as a replacement Suggestions would be appreciated.

Jimmie

# 2029. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 17:56:27 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <gh95kc$ats$1@news.albasani.net>
Source record: 3616

JIMMIE wrote:
> After years of avoiding morse code I am finally getting into it. the
> ideal of operating a very simple transmitter appeals to my junkbox/
> trashcan construction mentality.
> I am looking for a substitute for a 6L6 that has the plate brought out
> the top. I was trying to build a little Glowbug transmitter but was
> having all kinds of problems neutralizing the the thing. I think I
> would have better luck if I can separate the grid and plate circuits
> from each other. I am considering an 807 as a replacement Suggestions
> would be appreciated.
>
> Jimmie
An 807 IS a 6L6 with a top cap anode connection. Any of the TV line
output valves will also do the job if you want cheap, the 6DQ6B works
well and has an octal base (The sockets for the 807 are rare).
6146 or 2e26 etc work well but will cost you more.

Steve H

# 2030. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 18:20:33 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <ra7gj4dt1kdpau3fvgrenldl36dh39vnkh@4ax.com>
Source record: 3617

On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
<StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
wrote:

>The sockets for the 807 are rare

The 807 uses a readily available 5 contact socket. The 1625 (12V
equivalent) uses a 7 contact socket which can be difficult to locate.

73 de n4jvp

# 2031. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 19:02:28 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6pqnq5F9fetmU1@mid.individual.net>
Source record: 3618

JIMMIE wrote:

> After years of avoiding morse code I am finally getting into it. the
> ideal of operating a very simple transmitter appeals to my junkbox/
> trashcan construction mentality.
> I am looking for a substitue for a 6L6 that has the plate brought out
> the top. I was trying to build a little Glowbug transmitter but was
> having all kinds of problems neutralizing the the thing. I think I
> would have better luck if I can separate the grid and plate circuits
> from each other. I am considering an 807 as a replacement Suggestions
> would be appreciated.
>
> Jimmie

I'd go for a PL509 sweep output tube. I've had a kilowatt out of four of
them!

Bob

# 2032. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 21:24:37 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <gh9hqm$r40$1@news.albasani.net>
Source record: 3619

Registered User wrote:
> On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
> wrote:
>
>> The sockets for the 807 are rare
>
> The 807 uses a readily available 5 contact socket. The 1625 (12V
> equivalent) uses a 7 contact socket which can be difficult to locate.
>
> 73 de n4jvp
I'm in the UK and haven't been able to find any at the local hamfests,
where can I get them from? Octal sockets are readily available over here.

Steve H

# 2033. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-04 22:10:01 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <gh9kfq$ueh$1@news.albasani.net>
Source record: 3620

Bob wrote:
> JIMMIE wrote:
>
>> After years of avoiding morse code I am finally getting into it. the
>> ideal of operating a very simple transmitter appeals to my junkbox/
>> trashcan construction mentality.
>> I am looking for a substitue for a 6L6 that has the plate brought out
>> the top. I was trying to build a little Glowbug transmitter but was
>> having all kinds of problems neutralizing the the thing. I think I
>> would have better luck if I can separate the grid and plate circuits
>> from each other. I am considering an 807 as a replacement Suggestions
>> would be appreciated.
>>
>> Jimmie
>
> I'd go for a PL509 sweep output tube. I've had a kilowatt out of four of
> them!
>
> Bob
My first amp had 3 PL519s with a lethal power supply using a voltage
tripper direct off the 240V mains, heaters were direct off mains via a
1n5406 diode. It's still up in the parents loft somewhere, must dig it
out over the holidays and give it a try....

Steve H

# 2034. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 00:25:50 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B6ABB7CD8FA12MDWN@194.177.96.78>
Source record: 3621

Howdy,

When you get bored of big jugs with nipples on the top, you
might try a 6T9 compactron. It's very nice for a small transmitter.
You get a high mu triode and beam power pentode in one package.
I think the pentode is good for 12W.

I'd probably use a 1625 since they're cheap from Fair Radio
and sockets... we don't need no stinking sockets!

73,
Grumpy

JIMMIE <jimmie68@gmail.com> wrote in news:9dcff61e-91dd-4b57-8572-
908eb16f4117@t3g2000yqa.googlegroups.com:

> After years of avoiding morse code I am finally getting into it. the
> ideal of operating a very simple transmitter appeals to my junkbox/
> trashcan construction mentality.
> I am looking for a substitue for a 6L6 that has the plate brought out
> the top. I was trying to build a little Glowbug transmitter but was
> having all kinds of problems neutralizing the the thing. I think I
> would have better luck if I can separate the grid and plate circuits
> from each other. I am considering an 807 as a replacement Suggestions
> would be appreciated.
>
> Jimmie

# 2035. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 00:30:30 UTC
From: Registered User <n4jvp@ix.netcom.com>
Message-ID: <lpsgj41l2s7o9gi6d7md4uaaecbuuufcn9@4ax.com>
Source record: 3622

On Thu, 04 Dec 2008 21:24:37 +0000, Stev eH
<StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsl
jhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.
uk>
wrote:

>Registered User wrote:
>> On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
>> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsgh
gsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.
co.uk>
>> wrote:
>>
>>> The sockets for the 807 are rare
>>
>> The 807 uses a readily available 5 contact socket. The 1625 (12V
>> equivalent) uses a 7 contact socket which can be difficult to locate.
>>
>> 73 de n4jvp
>I'm in the UK and haven't been able to find any at the local hamfests,
>where can I get them from? Octal sockets are readily available over here.
>
Hmm, I'm surprised you haven't come across any at boot sales. I'm of
no help when it comes to vendors in the UK. You might try your
favorite search engine. The first page of this search links to several
vendors including one in AU.
http://www.google.com/search?hl=en&q=5-pin+tube+socket&aq=f&oq=
eBay is another possibility.

73 de n4jvp

# 2036. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 01:26:05 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812050119150.21918@sdf.lonestar.org>
Source record: 3623

On Thu, 4 Dec 2008, JIMMIE wrote:

> Date: Thu, 4 Dec 2008 06:23:48 -0800 (PST)
> From: JIMMIE <jimmie68@gmail.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: 6L6 substitute
>
> After years of avoiding morse code I am finally getting into it. the
> ideal of operating a very simple transmitter appeals to my junkbox/
> trashcan construction mentality.
> I am looking for a substitue for a 6L6 that has the plate brought out
> the top. I was trying to build a little Glowbug transmitter but was
> having all kinds of problems neutralizing the the thing. I think I
> would have better luck if I can separate the grid and plate circuits
> from each other.

Maybe you should look at how you bypassed the screen grid to ground with a capacitor. Once I built a 6146 pentode, grounded-cathode amplifier for 160 meters and was disappointed that it went into self-oscillation. After thinking about it, and then the light bulb over my head went off, I looked and realized I did not have the screen grid bypassed to ground (what, 0.01 mfd or so?), and when I soldered one in, all of my self oscilation stopped. You should not have to worry about neutralization if you are anywhere in the HF bands (or, at the worst, maybe on ten meters).

I've built several 6AQ5, 6V6, etc., one tube, xtal-controlled
CW transmitters. All worked fine.

I am considering an 807 as a replacement Suggestions
> would be appreciated.

You might also want to check the connections to the control grid. If for some reason you have a -- for example -- cold solder joint and the control grid is actually floating, then it will oscillate all by itself, too.

> Jimmie
>

# 2037. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 01:28:06 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812050126590.21918@sdf.lonestar.org>
Source record: 3624

On Thu, 4 Dec 2008, Registered User wrote:

> Date: Thu, 04 Dec 2008 19:30:30 -0500
> From: Registered User <n4jvp@ix.netcom.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: 6L6 substitute
>
> On Thu, 04 Dec 2008 21:24:37 +0000, Stev eH
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghg
sljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.c
o.uk>
> wrote:
>
>> Registered User wrote:
>>> On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
>>> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsg
hgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif
.co.uk>
>>> wrote:
>>>
>>>> The sockets for the 807 are rare
>>>
>>> The 807 uses a readily available 5 contact socket. The 1625 (12V
>>> equivalent) uses a 7 contact socket which can be difficult to locate.
>>>
>>> 73 de n4jvp
>> I'm in the UK and haven't been able to find any at the local hamfests,
>> where can I get them from? Octal sockets are readily available over here.
>>
> Hmm, I'm surprised you haven't come across any at boot sales. I'm of
> no help when it comes to vendors in the UK. You might try your
> favorite search engine. The first page of this search links to several
> vendors including one in AU.
> http://www.google.com/search?hl=en&q=5-pin+tube+socket&aq=f&oq=
> eBay is another possibility.
>
> 73 de n4jvp
>

Might try Fair Radio Sales, in Lima Ohio (USA). I think www.fairradio.com,
and they do (most of the time) answer email. They have stuff that is not
in the catalog, too.

# 2038. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 02:26:11 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <6j0_k.43032$zQ3.33628@newsfe12.iad>
Source record: 3625

"Stev eH"
<StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
wrote in message news:gh9kfq$ueh$1@news.albasani.net...
> My first amp had 3 PL519s with a lethal power supply using a voltage
> tripp{l}er direct off the 240V mains, heaters were direct off mains via a
> 1n5406 diode. It's still up in the parents loft somewhere, must dig it
> out over the holidays and give it a try....
>
> Steve H

Do you realize that the RMS value of half-wave rectified AC is not one half of the applied RMS voltage but rather 0.707 of the applied RMS voltage. So your three 40 volt filament PL519s actually saw about 56 volts RMS across each filament. I'll bet you wondered why the filaments were so bright.

To properly measure this voltage, you need a true RMS voltmeter. Most inepensive AC voltmeters actually measure the peak voltage and display the result on a scale calibrated for a sine wave input. RMS (root mean square) is the equivalent DC voltage that would produce the same HEATING in a resistance as the applied waveform.

Most hams are quite confused by this. Looking over some websites explaining this, one of the better ones is a Google Book Search of "Electric Machinery Fundamentals" by Stephen J. Chapman who presents the mathematics in detail starting on page 163:
http://books.google.com/books?id=ltg6QWnn2_4C&pg=PA163&lpg=PA163&dq=RMS+value+of+half+wave+rectified+AC&source=web&ots=MAd5Qt1_Qr&sig=qj4RhhaoT6OgA34lCcYxK2cy18k&hl=en&sa=X&oi=book_result&resnum=10&ct=result

As an interesting side note, the Philips datasheet on the PL519 is the first I have seen that explicitly discusses Barkhausen interference and how to suppress it.

73, Dr. Barry L. Ornitz WA4VZQ

## 2039. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 03:28:14 UTC
From: Grumpy The Mule <s_foonly@foo.bar>
Message-ID: <Xns9B6ADA690E12A2MDWN@194.177.96.78>
Source record: 3626

"NoSPAM" <unknown@nospam.org> wrote in
news:6j0_k.43032$zQ3.33628@newsfe12.iad:

snips
> "Electric Machinery Fundamentals" by Stephen J. Chapman who presents
> the mathematics in detail starting on page 163:
snips

Howdy,

Coincidence! That book is on my kitchen table at the moment.
It's ok, but this is probably more suited to the purpose;
http://www.tpub.com/neets/book7/27a.htm

73,Grumpy

# 2040. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 06:25:25 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.12.05.06.25.23.830720@localhost.localdomain>
Source record: 3627

On Thu, 04 Dec 2008 21:24:37 +0000, Stev eH wrote:

> Registered User wrote:
>> On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
>> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsgh
gsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.
co.uk>
>> wrote:
>>
>>> The sockets for the 807 are rare
>>
>> The 807 uses a readily available 5 contact socket. The 1625 (12V
>> equivalent) uses a 7 contact socket which can be difficult to locate.
>>
>> 73 de n4jvp
> I'm in the UK and haven't been able to find any at the local hamfests,
> where can I get them from? Octal sockets are readily available over here.
>
> Steve H

I have some. How many you need?

Cheers,

Gregg

# 2041. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 14:10:54 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <2e970708-85ce-41e6-9015-f51585bb1f6e@v42g2000yqv.googlegroups.com>
Source record: 3628

On Dec 4, 1:20 pm, Registered User <n4...@ix.netcom.com> wrote:
> On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxd...@tfif.co.uk>
> wrote:
>
> >The sockets for the 807 are rare
>
> The 807 uses a readily available 5 contact socket. The 1625 (12V
> equivalent) uses a 7 contact socket which can be difficult to locate.

Chinese Ceramic 5- and 7-pin sockets for 807's and 1625's are readily available. e.g. P-ST5-216 and P-ST7-311 from Antique Electronic Supply, or the same thing from ESRC on Ebay, items 130273824548 and 130273500741, or similar thigns from at least a dozen other web suppliers. (Antique Electronic Supply and ESRC I've been doing business with for many years). Vintage ceramic sockets from the 40's and 50's made by EF Johnson etc. turn up at hamfests pretty regularly too.

Tim N3QE

# 2042. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 16:24:11 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <29SdnaLYCv02yKTUnZ2dnUVZ_gqdnZ2d@web-ster.com>
Source record: 3629

On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:

> After years of avoiding morse code I am finally getting into it. the
> ideal of operating a very simple transmitter appeals to my junkbox/
> trashcan construction mentality.
> I am looking for a substitue for a 6L6 that has the plate brought out
> the top. I was trying to build a little Glowbug transmitter but was
> having all kinds of problems neutralizing the the thing. I think I would
> have better luck if I can separate the grid and plate circuits from each
> other. I am considering an 807 as a replacement Suggestions would be
> appreciated.
>
> Jimmie

Dunno if it's been mentioned yet -- 2E26. The 807 is _not_ a 6L6 in a different envelope -- it's quit arguably the 6L6's big brother, but it's got different ratings; it could probably be shoe-horned into a circuit designed for the 6L6, but you'd be missing out on about 6dB of final output power.

Antique Electronics Supply has 2E26's for $6.00 each, so it's not a bad buy -- and the 2E26 goes into an octal socket.

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

Need to learn how to apply control theory in your embedded system?
"Applied Control Theory for Embedded Systems" by Tim Wescott
Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

# 2043. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 16:28:43 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <29Sdnd3YCv0my6TUnZ2dnUVZ_gqdnZ2d@web-ster.com>
Source record: 3630

On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:

> After years of avoiding morse code I am finally getting into it. the
> ideal of operating a very simple transmitter appeals to my junkbox/
> trashcan construction mentality.
> I am looking for a substitue for a 6L6 that has the plate brought out
> the top. I was trying to build a little Glowbug transmitter but was
> having all kinds of problems neutralizing the the thing. I think I would
> have better luck if I can separate the grid and plate circuits from each
> other. I am considering an 807 as a replacement Suggestions would be
> appreciated.
>
> Jimmie

Have you considered a 6L6 with careful shielding at the socket? IIRC the pins that neighbor the plate pin would be at RF potential; you could put a big, flat, high-value ceramic right between those socket pins to shield the grid, and possible even extend the shield out if you were willing to hand-make a cap from copper strip and Kapton tape.

It's kinda heroic measures to take on a tube that's more expensive now than it's "high-tech" RF brethren, but if you just gotta have that metal-tube look it may do the trick.

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

Need to learn how to apply control theory in your embedded system?
"Applied Control Theory for Embedded Systems" by Tim Wescott
Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

# 2044. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 17:16:59 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <bec827ed-f2d7-4754-abfe-684b92916ba9@20g2000yqt.googlegroups.com>
Source record: 3631

On Dec 5, 11:28 am, Tim Wescott <t...@seemywebsite.com> wrote:
> On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:
> > After years of avoiding morse code I am finally getting into it. the
> > ideal of operating a very simple transmitter appeals to my junkbox/
> > trashcan construction mentality.
> > I am looking for a substitue for a 6L6 that has the plate brought out
> > the top. I was trying to build a little Glowbug transmitter but was
> > having all kinds of problems neutralizing the the thing. I think I would
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> > other. I am considering an 807 as a replacement Suggestions would be
> > appreciated.
>
> > Jimmie
>
> Have you considered a 6L6 with careful shielding at the socket?  IIRC the
> pins that neighbor the plate pin would be at RF potential; you could put
> a big, flat, high-value ceramic right between those socket pins to shield
> the grid, and possible even extend the shield out if you were willing to
> hand-make a cap from copper strip and Kapton tape.
>
> It's kinda heroic measures to take on a tube that's more expensive now
> than it's "high-tech" RF brethren, but if you just gotta have that metal-
> tube look it may do the trick.
>
> --
> Tim Wescott
> Control systems and communications consultinghttp://www.wescottdesign.com
>
> Need to learn how to apply control theory in your embedded system?
> "Applied Control Theory for Embedded Systems" by Tim Wescott
> Elsevier/Newnes,http://www.wescottdesign.com/actfes/actfes.html

I have a NOS 6DQ6 I can use in place of the 6L6s. I think they will
work. the biggest problem will be relocating the plate circuit. I will
have to add a front panel to my "fool killer" to hold the tuning
caps.

Jimmie

# 2045. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 17:27:27 UTC
From: Stev eH <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
Message-ID: <ghboa1$9a5$1@news.albasani.net>
Source record: 3632

geek wrote:
> On Thu, 04 Dec 2008 21:24:37 +0000, Stev eH wrote:
>
>> Registered User wrote:
>>> On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
>>> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
>>> wrote:
>>>
>>>> The sockets for the 807 are rare
>>> The 807 uses a readily available 5 contact socket. The 1625 (12V
>>> equivalent) uses a 7 contact socket which can be difficult to locate.
>>>
>>> 73 de n4jvp
>> I'm in the UK and haven't been able to find any at the local hamfests,
>> where can I get them from? Octal sockets are readily available over here.
>>
>> Steve H
>
> I have some. How many you need?
>
> Cheers,
>
> Gregg
>
I could do with a pair, I have several 807 in the junk box and the look
far better to me than the "Modern" style of valve. The email address is
valid BTW.

Steve H

# 2046. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 18:04:30 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <d6511cf0-1b00-4906-b953-86b366b5da03@x38g2000yqj.googlegroups.com>
Source record: 3633
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

On Dec 3, 4:51 pm, raypsi <RBorow...@gmail.com> wrote:
> On Nov 29, 5:42 pm, Steve <moparho...@hotmail.com> wrote:
>
>
>
>
>
>
>
> > JIMMIE <jimmi...@gmail.com> wrote:
> > > On Nov 29, 9:44=A0am, Telstar Electronics <briangrif...@sbcglobal.net>
> > > wrote:
> > > > > So did Mouser assist you in the design, or put up money to market you
> > > > > splatter circuit? Do they get a cut of your business? Do they sell
> > > > > your junk in their catalog? Or is your only partnership just that you
> > > > > order parts from them? Do they even know what you order parts for?
> > > > > Partner with Mouser, yeah right, just more telestar hype.
>
> > > > Commander... Like I said earlier... the dictionary defines partner as
> > > > "One that is united or associated
> > > > with another or others in an activity or a sphere of common interest."
> > > > I guess you're not able to comprehend that sentence. Not really
> > > > surprising. If you're looking for an argument... I only argue with
> > > > worthwhile adversaries... lol
>
> > > Perhaps Mouser should be informed of this claim to partnership. They
> > > may very interested.
>
> > > Jimmie
>
> > Oh no, are you going to report him to Mouser?
>
> > --
> >                  http://NewsReader.Com/
>
> Hey OM
>
> well I tell you what let's say a certain company is running
> racketeering like some big electronics firm.
> This racket involves taking peoples money and laundering it then
> giving it back after it's been laundered. Now lets say you partnered
> with this company then you too would be guilty of racketeering  which
> under RICO laws is a felony.

>
> So in the end your so called definition of partner would fall under
> the guise of RICO and you will go to jail for a real long time and
> your best friend in jail will be bubba.
>
> In other words your guilty by association.
>
> 73 OM
>
> n8zu

Thats happened, when you raid a cathouse you get the piano player too.
Perhaps one could prove their disassociation enough to stay out of
jail but your lawyer may be putting a new addition on his house and
dedicating it to you.

# 2047. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-05 20:50:34 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <535f4dfe-0fef-4e06-95e6-36fb5ce2cacb@j32g2000yqn.googlegroups.com>
Source record: 3634

On Dec 5, 12:27 pm, Stev eH
> I could do with a pair, I have several 807 in the junk box and the look
> far better to me than the "Modern" style of valve.

Even modern Chinese-made 807's have the ST glass shape.

The one that is not sexy is the 807W.

My favorite book of tube pr0n is "RCA Air-Cooled Transmitting Tubes",
TT3. Great big full-page engravings of the best tubes. Worth all 25
cents.

Tim.

# 2048. Re: VoiceMax Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 00:23:43 UTC
From: Steve <moparholic@hotmail.com>
Message-ID: <20081205192241.772$qD@newsreader.com>
Source record: 3635
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.amateur.equipment

raypsi <RBorowiak@gmail.com> wrote:
> On Nov 29, 5:42 pm, Steve <moparho...@hotmail.com> wrote:
> > JIMMIE <jimmi...@gmail.com> wrote:
> > > On Nov 29, 9:44=A0am, Telstar Electronics
> > > <briangrif...@sbcglobal.net> wrote:
> > > > So did Mouser assist you in the design, or put up money to market
> > > > you splatter circuit? Do they get a cut of your business? Do they
> > > > sell your junk in their catalog? Or is your only partnership just
> > > > that you order parts from them? Do they even know what you order
> > > > parts for? Partner with Mouser, yeah right, just more telestar
> > > > hype.
> >
> > > > Commander... Like I said earlier... the dictionary defines partner
> > > > as "One that is united or associated
> > > > with another or others in an activity or a sphere of common
> > > > interest." I guess you're not able to comprehend that sentence. Not
> > > > really surprising. If you're looking for an argument... I only
> > > > argue with worthwhile adversaries... lol
> >
> > > Perhaps Mouser should be informed of this claim to partnership. They
> > > may very interested.
> >
> > > Jimmie
> >
> > Oh no, are you going to report him to Mouser?
> >
> > --
> > http://NewsReader.Com/
>
> Hey OM
>
> well I tell you what let's say a certain company is running
> racketeering like some big electronics firm.
> This racket involves taking peoples money and laundering it then
> giving it back after it's been laundered. Now lets say you partnered
> with this company then you too would be guilty of racketeering which
> under RICO laws is a felony.
>
> So in the end your so called definition of partner would fall under
> the guise of RICO and you will go to jail for a real long time and
> your best friend in jail will be bubba.
>
> In other words your guilty by association.

>
> 73 OM
>
> n8zu
>
Hello zu,

You're right about the guilt by association, just look at what happened to
OJ Simpsons' friend today. 15 years is along way to go for a ride along.

73
Steve.

--
http://NewsReader.Com/

# 2049. Ganged variable capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 00:34:24 UTC
From: Dirac1pt6@aol.com
Message-ID: <98045ffa-4dfe-40a3-8500-807e47b518a2@n10g2000yqm.googlegroups.com>
Source record: 3636

Dear all,
I am just taking my first small steps into homebrew and learning as much as I can, but I have run into a problem that has me stumped. I'm seeing some odd behavior with a variable air capacitor (first time I have played with one of these), and have not been able to hunt down anything relevant searching the net, so I am hoping someone out there might be able to help me understand this. It is a 6 gang model with sections of 120,150,20,30,90,and 30 pf. I was able to use a continuity meter to work out the lugs, and found that the rotor is continuous with the frame, and stator is isolated into 6 seperate sections with no continuity between the rotor and stator. I assumed that I could jump the stator lugs (none of which are continuous with the rotor) with some copper wire to add up the gangs, but when I do this the continuity meter tells me that the rotor and stator are connected. It only happens to the gangs that I jump. I was expecting continuity between the stator segments of the jumped gangs, but not between the stator and rotor. Can anyone let me know if this is an expected result, and if not suggest what I might be doing wrong?
Thanks in advance for your help.
Rusty.

# 2050. Re: Ganged variable capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 01:39:27 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <ot6dndwCbftRSqTUnZ2dnUVZ_oTinZ2d@posted.visi>
Source record: 3637

Rusty,
That is an odd result...Are you certain that you don't have a stray wire touching the frame somewhere?
If you measure an open from two gangs to the frame, and then jumper those two gangs, measure a short, and then cut (not desolder) the wire connecting them, are both stators still open with respect to the frame?
Are there trimmer capacitors connected from each gang to the frame (screws with a thin mica insulator between the plates)? If so, perhaps you are damaging them when you solder wires to the stator lugs. (Assuming you are soldering).
Let us know how this comes out. Homebrewing is great.

Bob WB0POQ

<Dirac1pt6@aol.com> wrote in message
news:98045ffa-4dfe-40a3-8500-807e47b518a2@n10g2000yqm.googlegroups.com...
> Dear all,
> I am just taking my first small steps into homebrew and learning as
> much as I can, but I have run into a problem that has me stumped. I'm
> seeing some odd behavior with a variable air capacitor (first time I
> have played with one of these), and have not been able to hunt down
> anything relevant searching the net, so I am hoping someone out there
> might be able to help me understand this. It is a 6 gang model with
> sections of 120,150,20,30,90,and 30 pf. I was able to use a
> continuity meter to work out the lugs, and found that the rotor is
> continuous with the frame, and stator is isolated into 6 seperate
> sections with no continuity between the rotor and stator. I assumed
> that I could jump the stator lugs (none of which are continuous with
> the rotor) with some copper wire to add up the gangs, but when I do
> this the continuity meter tells me that the rotor and stator are
> connected. It only happens to the gangs that I jump. I was expecting
> continuity between the stator segments of the jumped gangs, but not
> between the stator and rotor. Can anyone let me know if this is an
> expected result, and if not suggest what I might be doing wrong?
> Thanks in advance for your help.
> Rusty.

# 2051. Re: Ganged variable capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 02:52:54 UTC
From: Dirac1pt6@aol.com
Message-ID: <75eb931e-74df-4503-a39a-88959e734697@d14g2000yqb.googlegroups.com>
Source record: 3638

Bob,
I think I just sent you an email by mistake when I was trying to post a reply (sorry about that). In case anyone else is interested, it turns out that the suggestion to cut the wire instead of desoldering led me to find that just heating the lug could recreate the short. Apparently there is some solder on the inside of the capacitor that caused the short after it melted when I was adding the jumper wire. Desoldering the wire must have coincidentally reversed this. I was able to heat and tap to get rid of the short and all seems to be working now.
Thanks for the help,
Rusty.

# 2052. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 04:23:26 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.12.06.04.23.20.470395@localhost.localdomain>
Source record: 3639

On Fri, 05 Dec 2008 17:27:27 +0000, Stev eH wrote:

> geek wrote:
>> On Thu, 04 Dec 2008 21:24:37 +0000, Stev eH wrote:
>>
>>> Registered User wrote:
>>>> On Thu, 04 Dec 2008 17:56:27 +0000, Stev eH
>>>> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxdldf@tfif.co.uk>
>>>> wrote:
>>>>
>>>>> The sockets for the 807 are rare
>>>> The 807 uses a readily available 5 contact socket. The 1625 (12V
>>>> equivalent) uses a 7 contact socket which can be difficult to locate.
>>>>
>>>> 73 de n4jvp
>>> I'm in the UK and haven't been able to find any at the local hamfests,
>>> where can I get them from? Octal sockets are readily available over here.
>>>
>>> Steve H
>>
>> I have some. How many you need?
>>
>> Cheers,
>>
>> Gregg
>>
> I could do with a pair, I have several 807 in the junk box and the look
> far better to me than the "Modern" style of valve. The email address is
> valid BTW.
>
> Steve H

Hi Steve,

Sent you an email :-)

Mine is geek <at> scorpiorising <dot> ca if you don't get it.

Cheers,

Gregg

# 2053. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 15:36:05 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <GSw_k.4664$n_5.4380@bignews7.bellsouth.net>
Source record: 3640

Stev eH wrote:
> JIMMIE wrote:
>> After years of avoiding morse code I am finally getting into it. the
>> ideal of operating a very simple transmitter appeals to my junkbox/
>> trashcan construction mentality.
>> I am looking for a substitute for a 6L6 that has the plate brought out
>> the top. I was trying to build a little Glowbug transmitter but was
>> having all kinds of problems neutralizing the the thing. I think I
>> would have better luck if I can separate the grid and plate circuits
>> from each other. I am considering an 807 as a replacement Suggestions
>> would be appreciated.
>>
>> Jimmie
> An 807 IS a 6L6 with a top cap anode connection. Any of the TV line
> output valves will also do the job if you want cheap, the 6DQ6B works
> well and has an octal base (The sockets for the 807 are rare).
> 6146 or 2e26 etc work well but will cost you more.
>
> Steve H
The 6BG6G / GA sweep tube is identical to the 6L6G but with a top plate cap.

# 2054. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 16:03:12 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <5gx_k.4672$n_5.1973@bignews7.bellsouth.net>
Source record: 3641

Tim Wescott wrote:
> On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:
>
>> After years of avoiding morse code I am finally getting into it. the
>> ideal of operating a very simple transmitter appeals to my junkbox/
>> trashcan construction mentality.
>> I am looking for a substitue for a 6L6 that has the plate brought out
>> the top. I was trying to build a little Glowbug transmitter but was
>> having all kinds of problems neutralizing the the thing. I think I would
>> have better luck if I can separate the grid and plate circuits from each
>> other. I am considering an 807 as a replacement Suggestions would be
>> appreciated.
>>
>> Jimmie
>
> Dunno if it's been mentioned yet -- 2E26. The 807 is _not_ a 6L6 in a
> different envelope -- it's quit arguably the 6L6's big brother, but it's
> got different ratings; it could probably be shoe-horned into a circuit
> designed for the 6L6, but you'd be missing out on about 6dB of final
> output power.
>
The 807 IS a 6L6G with a 5 pin base and the plate connected to the top.
The published ratings of the 6L6G look different than the 807 because of
their intended use. ICAS ratings for the 6L6G were never published.
Also the 807 has additional shielding and insulation over the 6L6G that
make it usable at higher frequencies and voltages than the 6L6G. Most
807's have ceramic spaces to support the plate which are lacking in the
6L6G. But make no mistake about it, the two tubes share the IDENTICAL
cathode, grids, and plate structures.

The 6BG6G tv sweep tube IS an 807 with an octal base. It has the same
ceramic plate supports, but lacks the extra rf shielding.

The 1625 is an 807 with a 12.6 volt heater and a large (same as type
'59) 7 pin base.

The type 1614 is a metal tube based on the 6L6. It is a transmitting
version, and probably has additional shielding. Otherwise its internal
structure is the same as the 6L6 metal type.

The type 1619 is sorta kinda a 6L6 with a directly heated 2.5v cathode.
Same metal bulb as the 6L6. Specs' are different due to the different
element spacing thanks to the filament cathode. This tube is often
triode connected to replace 45's and 2A3's in old radios with a socket
adapter.

As a result the of the construction differences regarding shielding, the 807 often would NOT need neutralization while 6L6G's and 6BG6G tubes used as rf power amps do.

The 6L6GA was identical to the 6L6G except that the bulb shrunk from an ST16 to an ST14 size. The 6L6GB was identical except for the bulb changing again to a T14. The 6L6GC is a totally different bottle with higher plate and screen dissipation and plate voltage ratings. The 6L6GC was said to be a plug in replacement for the older 6L6 tubes, but RCA kept the 6L6GB around for a while anyway. In fact a bias re-adjustment was a good idea when replacing an older 6L6 with the 'GC version if a cathode bias resistor wasn't used.

> Antique Electronics Supply has 2E26's for $6.00 each, so it's not a bad
> buy -- and the 2E26 goes into an octal socket.
>

## 2055. Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 20:17:20 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C5601DD000F264B8B01AD9AF@news.sf.sbcglobal.net>
Source record: 3642
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Building a small 2.4 GHz detector:

<http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm>

Regarding the dimensions of the wire loops:

ant: 28 mm square
reflector: 30 mm square
separation: 10mm
wire: 14ga solid (1.6mm dia)

Are these dimensions center-to-center of the conductors? Or are these dimensions the space between the conductors? With a conductor diam of 1.6mm, this is more than 10 percent of one dimension (separation), so I think it's important to get it right.

Also, is the reflector to be grounded or floating?

Thanks.

# 2056. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 20:56:38 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-632AC2.15563806122008@nntp.aioe.org>
Source record: 3643

In article
<9dcff61e-91dd-4b57-8572-908eb16f4117@t3g2000yqa.googlegroups.com>,
JIMMIE <jimmie68@gmail.com> wrote:

> I am considering an 807 as a replacement

Jimmie-

Just how simple will this transmitter be? My first novice transmitter was built from an ARRL publication back in the 50s. The specification was for a single 6V6, used as a crystal oscillator with output coupled to the antenna.

I found I could get more power with a 6L6 plugged into the same socket. Along the way to getting more power, I found that crystal current would increase to the point where the crystal would fracture!

If you use a 807 or 1625, I hope you will have a lower power oscillator driving it. Something like a 6AG7 would make a nice crystal oscillator, and should have sufficient output to drive an 807.

73,
Fred
K4DII

# 2057. Re: Females love to show off in front of their webcams

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 21:24:53 UTC
From: Runge13 <philsa@bigfoot.com>
Message-ID: <493aedb9$0$938$ba4acef3@news.orange.fr>
Source record: 3644
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Hypocrits
"J. Hugh Sullivan" <Eagle@bellsouth.net> a ï¿½crit dans le message de
news:49347c37.40462203@newsgroups.bellsouth.net...
> On Mon, 1 Dec 2008 16:47:04 -0500, "Ed Cregger"
> <ecregger@bellsouff.net> wrote:
>
>>If they're not talking on ham radio, we're not interested.
>>
>>Ed, N2ECW
>
> Concur.
>
> Hugh, WA4QZU
>>
>>-------
>>
>><elvinabr@gmail.com> wrote in message
>>news:b8ce10db-378c-4ac2-81a5-f4fb023239ac@f3g2000yqf.googlegroups.com...
>>> Females love webcams http://westsex.withsex.com
>>
>>
>

# 2058. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 21:26:08 UTC
From: dplatt@radagast.org
Message-ID: <g87r06-b4r.ln1@radagast.org>
Source record: 3645
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

><http://www.atvinderby.co.uk/2.4Ghz_SWR_Meter.htm>
>
>Regarding the dimensions of the wire loops:
>
>ant: 28 mm square
>reflector: 30 mm square
>separation: 10mm
>wire: 14ga solid (1.6mm dia)
>
>Are these dimensions center-to-center of the conductors? Or are these
>dimensions the space between the conductors? With a conductor diam of 1.6mm,
>this is more than 10 percent of one dimension (separation), so I think it's
>important to get it right.

It's probably not actually all that important. Quads are not highly
in their dimensioning. Altering the positioning between the driven
(active) element, and the reflector, will change the antenna's pattern
(gain and front-to-back radio) slightly, and will alter the feedpoint
impedance slightly. Neither of these changes is going to be
particularly significant (and quite possibly not easy to detect) in
this situation. The fact that there's a lot of additional metal in
the neighborhood of the antenna (the BNC connector, etc.) is probably
going to alter the pattern more than the spacing different will
(compared to a theoretically perfect quad in free space).

The pattern of a two-element quad is fairly broad, and the
front-to-back ratio isn't terribly high. It's not the best design for
pinpoint aiming / location of a microwave source... but that isn't
really what this device was intended for. As a field-strength meter,
it'll work fine (and probably just about equally well) with a 10mm
separation edge-to-edge or center-to-center.

>Also, is the reflector to be grounded or floating?

In a quad, it is usual for all of the elements other than the driven
one to be floating. Since the article says that the reflector is
fastened with a dollop of glue, I think it's safe to assume that it's
intended to be floating.

That detector is a slick little design - thanks for posting the link!

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will

boycott any company which has the gall to send me such ads!

# 2059. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 21:41:00 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <6hC_k.4612$YU6.3409@bignews8.bellsouth.net>
Source record: 3646

Fred McKenzie wrote:
> In article
> <9dcff61e-91dd-4b57-8572-908eb16f4117@t3g2000yqa.googlegroups.com>,
> JIMMIE <jimmie68@gmail.com> wrote:
>
>> I am considering an 807 as a replacement
>
> Jimmie-
>
> Just how simple will this transmitter be? My first novice transmitter
> was built from an ARRL publication back in the 50s. The specification
> was for a single 6V6, used as a crystal oscillator with output coupled
> to the antenna.
>
> I found I could get more power with a 6L6 plugged into the same socket.
> Along the way to getting more power, I found that crystal current would
> increase to the point where the crystal would fracture!
>
> If you use a 807 or 1625, I hope you will have a lower power oscillator
> driving it. Something like a 6AG7 would make a nice crystal oscillator,
> and should have sufficient output to drive an 807.
>
> 73,
> Fred
> K4DII
The 6AG7 - 807 combo is a classic. E. F. Johnson sold a 50 Watt Novice
transmitter in the '50's with this tube line up (also a 5R4GY rectifier
IIRC). Other tubes that have been used as the oscillator/driver were
the 6CL6, 12BY7, 6GK6, and 5763.

# 2060. Re: uses for exotic capacitor types?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-06 22:20:49 UTC
From: xpyttl <xpyttl_NOSPAM@earthling.net>
Message-ID: <bVC_k.40758$kn7.27228@newsfe08.iad>
Source record: 3647

"exray" <radioexray@geeemail.com> wrote in message
news:gh40qb0k0e@news3.newsguy.com...
> highlandham wrote:
>
>> They might be OK capacity and voltage wise ,but are possibly not suitable
>> to handle RF current ,so when using them in HV RF circuits it might be
>> better to use a few in parallel.
>>
>> Frank KN6WH
>
> That may well be true but thats also why I stated a case of a 200-watt
> output rig where they DID work.
>
> -Bill

A year or so ago I toasted a cap in my SDG tuner. I don't recall the value
but it was one of a few in that tuner with ratings between 7.5 and 15 kV.
They looked just like you described. I order a replacement, plus
replacements for all the other HV caps in that tuner just in case. The
parts from Digikey looked just like the parts in the tuner, blue, shaped
kind of like an overweight disc ceramic.

Only a 100 watt rig, but if you hit the feedline with enough SWR you sure
can get the volts right up there.

..

# 2061. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 00:22:58 UTC
From: philo <philo@privacy.net>
Message-ID: <psudnVF_9b0Ci6bUnZ2dnUVZ_vGdnZ2d@ntd.net>
Source record: 3648

"Stev eH"
<StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdg
fgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyry
lxybvryvbfbllyxdldf@tfif.co.uk> wrote in message
news:gh95kc$ats$1@news.albasani.net...
> JIMMIE wrote:
> > After years of avoiding morse code I am finally getting into it. the
> > ideal of operating a very simple transmitter appeals to my junkbox/
> > trashcan construction mentality.
> > I am looking for a substitute for a 6L6 that has the plate brought out
> > the top. I was trying to build a little Glowbug transmitter but was
> > having all kinds of problems neutralizing the the thing. I think I
> > would have better luck if I can separate the grid and plate circuits
> > from each other. I am considering an 807 as a replacement Suggestions
> > would be appreciated.
> >
> > Jimmie
> An 807 IS a 6L6 with a top cap anode connection. Any of the TV line
> output valves will also do the job if you want cheap, the 6DQ6B works
> well and has an octal base (The sockets for the 807 are rare).
> 6146 or 2e26 etc work well but will cost you more.
>
> Steve H

No way!

Back in the old days I've used both 6L6 and 807's and they are not the same
tube at all.

You could probably use a 6L6 to drive an 807 though

IIRC, the usual driver for an 807 was often a 6AG7 but I'd sure a 6L6 would
be fine

# 2062. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 03:06:55 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <k3H_k.4873$UI2.3075@bignews6.bellsouth.net>
Source record: 3649

philo wrote:
> "Stev eH"
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdg
> fgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyry
> lxybvryvbfbllyxdldf@tfif.co.uk> wrote in message
> news:gh95kc$ats$1@news.albasani.net...
>> JIMMIE wrote:
>>> After years of avoiding morse code I am finally getting into it. the
>>> ideal of operating a very simple transmitter appeals to my junkbox/
>>> trashcan construction mentality.
>>> I am looking for a substitute for a 6L6 that has the plate brought out
>>> the top. I was trying to build a little Glowbug transmitter but was
>>> having all kinds of problems neutralizing the the thing. I think I
>>> would have better luck if I can separate the grid and plate circuits
>>> from each other. I am considering an 807 as a replacement Suggestions
>>> would be appreciated.
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>>> Jimmie
>> An 807 IS a 6L6 with a top cap anode connection. Any of the TV line
>> output valves will also do the job if you want cheap, the 6DQ6B works
>> well and has an octal base (The sockets for the 807 are rare).
>> 6146 or 2e26 etc work well but will cost you more.
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>> Steve H
>
>
> No way!
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> Back in the old days I've used both 6L6 and 807's and they are not the same
> tube at all.
>
> You could probably use a 6L6 to drive an 807 though
>
> IIRC, the usual driver for an 807 was often a 6AG7 but I'd sure a 6L6 would
> be fine
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>
Just for grins I got out the RCA tube handbook and compared the plate
curves for the 807 and the 6L6. Up to the limits for the 6L6, they are
IDENTICAL. The 807 curves go to higher plate voltage and current.

The 807 and the 6L6 have the SAME cathode, grid and plate structures.
The differences are in the shielding added to the 807 to reduce
grid-plate and grid-cathode capacitance, and in the plate support

spacers which are ceramic in the 807 to increase the operating voltage rating of the tube (which is also helped by the plate top connection). You can see the added shielding just above and below the plate supports. The 807 is a MUCH better performer at RF than the 6L6, it usually does NOT require neutralization and would have more power gain than the 6L6.

At Audio frequencies the two tubes will perform IDENTICALLY within their maximum ratings.

## 2063. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 07:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1228633501@panix.com>
Source record: 3650
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.1 2007/09/29 18:42:47
Posting-Frequency: posted monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.
```

## 2064. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 08:03:47 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C560C363002469FFB01AD9AF@news.sf.sbcglobal.net>
Source record: 3651
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> It's probably not actually all that important.
> dplatt

- - -

Thanks for your comments and evaluation of the project. They are helpful to someone not skilled in the black art of wireless :-)

I plan to modify the design a bit, eliminating all coax connectors & adapters, using just 2 banana plugs (and supporting plastic block) as the connection to the meter.

Is it any more efficient to use copper foil or PCB material as the reflector rather than wire?

Thanks.

## 2065. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 09:35:01 UTC
From: Bill <Bill@birchnet.demon.co.uk>
Message-ID: <W2iE4gpFj5OJFweJ@birchnet.demon.co.uk>
Source record: 3652
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

In message <0001HW.C560C363002469FFB01AD9AF@news.sf.sbcglobal.net>,
SparkyGuy <sparkyguy@mumcrank.ck> writes
>> It's probably not actually all that important.
>> dplatt
>
>- - -
>
>Thanks for your comments and evaluation of the project. They are helpful to
>someone not skilled in the black art of wireless :-)
>
>I plan to modify the design a bit, eliminating all coax connectors &
>adapters, using just 2 banana plugs (and supporting plastic block) as the
>connection to the meter.
>
>Is it any more efficient to use copper foil or PCB material as the reflector
>rather than wire?
>
>Thanks.
>

A novel bit of kit, looking at the photos it appears to be being used
with a DVM, depending on how you want to use it you may find an analogue
meter easier. It will show changes better than a DVM. How about buying
a movement and a box and building a totally dedicated unit? I'm tempted
to make something similar.
--
Bill
May God defend me from my friends; I can defend myself against my enemies.

# 2066. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 12:43:37 UTC
From: Bob Bob <bob3bob3@suddenlink.net>
Message-ID: <q0ts06-o7v.ln1@p400bob.personal.cox.net>
Source record: 3653
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

An interesting design...

Keep in mind that you are building a relative, not absolute measurement device. ie you can calibrate (or not) it anyway you like. Any piece of wire will have a voltage induced into it by a passing EM field!

The only real concern is that you may want to ensure that the directivity of the quad is reasonably unidirectional. Some quad designs have pretty bad front to back performance. This may give you erronous results if you start seeing reflections or other TX's of the back of your antenna. The easy way to overcome this is to calibrate the pattern by rotating the unit in an active 2.4GHz field and noting some values. You can then use these in later tests.

Cheers Bob

SparkyGuy wrote:
>
> Regarding the dimensions of the wire loops:
>

# 2067. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 15:19:19 UTC
From: philo <philo@privacy.net>
Message-ID: <wpWdnQOHtbQudabUnZ2dnUVZ_vGdnZ2d@ntd.net>
Source record: 3654

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:k3H_k.4873$UI2.3075@bignews6.bellsouth.net...
> philo wrote:
> > "Stev eH"
> >
<StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdg
> >
fgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyry
> > lxybvryvbfbllyxdldf@tfif.co.uk> wrote in message
> > news:gh95kc$ats$1@news.albasani.net...
> >> JIMMIE wrote:
> >>> After years of avoiding morse code I am finally getting into it. the
> >>> ideal of operating a very simple transmitter appeals to my junkbox/
> >>> trashcan construction mentality.
> >>> I am looking for a substitute for a 6L6 that has the plate brought out
> >>> the top. I was trying to build a little Glowbug transmitter but was
> >>> having all kinds of problems neutralizing the the thing. I think I
> >>> would have better luck if I can separate the grid and plate circuits
> >>> from each other. I am considering an 807 as a replacement Suggestions
> >>> would be appreciated.
> >>>
> >>> Jimmie
> >> An 807 IS a 6L6 with a top cap anode connection. Any of the TV line
> >> output valves will also do the job if you want cheap, the 6DQ6B works
> >> well and has an octal base (The sockets for the 807 are rare).
> >> 6146 or 2e26 etc work well but will cost you more.
> >>
> >> Steve H
> >
> >
> > No way!
> >
> > Back in the old days I've used both 6L6 and 807's and they are not the
same
> > tube at all.
> >
> > You could probably use a 6L6 to drive an 807 though
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> > IIRC, the usual driver for an 807 was often a 6AG7 but I'd sure a 6L6
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> > be fine
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> >
> Just for grins I got out the RCA tube handbook and compared the plate

> curves for the 807 and the 6L6. Up to the limits for the 6L6, they are
> IDENTICAL. The 807 curves go to higher plate voltage and current.
>
> The 807 and the 6L6 have the SAME cathode, grid and plate structures.
> The differences are in the shielding added to the 807 to reduce
> grid-plate and grid-cathode capacitance, and in the plate support
> spacers which are ceramic in the 807 to increase the operating voltage
> rating of the tube (which is also helped by the plate top connection).
> You can see the added shielding just above and below the plate supports.
> The 807 is a MUCH better performer at RF than the 6L6, it usually does
> NOT require neutralization and would have more power gain than the 6L6.
>
> At Audio frequencies the two tubes will perform IDENTICALLY within their
> maximum ratings.
>

Wow...thanks for the info. They are considerably closer in specs than I realized.

Of course, you could run an 807 quite a bit past their official ratings and never burn one out.

I recall tuning my transmitter for absolute maximum output...and that occurred right around 50watts input.

(probably on 40 meters. I'm sure that on ten meters it would have been a lot less)

Ran my 807 rig for years like that.

Don't really know what my 6L6 transmitter would have done...
just ran it on 40 meters at about 25 watts input...we always just considered them to be audio tubes.

If I were going to build a tube transmitter today, I'd probably use a 6146B.

# 2068. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 16:54:39 UTC
From: dplatt@radagast.org
Message-ID: <fnbt06-um1.ln1@radagast.org>
Source record: 3655
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

>Thanks for your comments and evaluation of the project. They are helpful to
>someone not skilled in the black art of wireless :-)
>
>I plan to modify the design a bit, eliminating all coax connectors &
>adapters, using just 2 banana plugs (and supporting plastic block) as the
>connection to the meter.

That should certainly work!

>Is it any more efficient to use copper foil or PCB material as the reflector
>rather than wire?

I believe not.

PCB material will probably be less efficient - standard FR-4
fiberglass-and-epoxy has significant losses at 2.4 GHz. Also, the
presence of the FR-4 will change the effective length/diameter of the
reflector loop... you might have to change the loop diameter to
compensate.

Foil would probably be bit less efficient than wire, assuming that the
width of the foil was the same as the diameter of the wire - less
surface area for the current to flow through, and perhaps more current
crowding to the edges of the foil due to skin effect. It'd also be
significantly less rugged.

Once again, neither of these losses of efficiency is likely to be
terribly important in this application, but why run the risk?

I'd just stick with solid copper wire of a reasonable diameter/gauge,
as it'll be electrically efficient and mechanically strong and rigid,
easy to get, and inexpensive.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

# 2069. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 17:49:55 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <JWT_k.4856$dc4.2866@bignews2.bellsouth.net>
Source record: 3656

philo wrote:
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:k3H_k.4873$UI2.3075@bignews6.bellsouth.net...
>> philo wrote:
>>> "Stev eH"
>>>
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdg
> fgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyry
>>> lxybvryvbfbllyxdldf@tfif.co.uk> wrote in message
>>> news:gh95kc$ats$1@news.albasani.net...
>>>> JIMMIE wrote:
>>>>> After years of avoiding morse code I am finally getting into it. the
>>>>> ideal of operating a very simple transmitter appeals to my junkbox/
>>>>> trashcan construction mentality.
>>>>> I am looking for a substitute for a 6L6 that has the plate brought out
>>>>> the top. I was trying to build a little Glowbug transmitter but was
>>>>> having all kinds of problems neutralizing the the thing. I think I
>>>>> would have better luck if I can separate the grid and plate circuits
>>>>> from each other. I am considering an 807 as a replacement Suggestions
>>>>> would be appreciated.
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>>>>> Jimmie
>>>> An 807 IS a 6L6 with a top cap anode connection. Any of the TV line
>>>> output valves will also do the job if you want cheap, the 6DQ6B works
>>>> well and has an octal base (The sockets for the 807 are rare).
>>>> 6146 or 2e26 etc work well but will cost you more.
>>>>
>>>> Steve H
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>>> No way!
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>>> Back in the old days I've used both 6L6 and 807's and they are not the
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>>> You could probably use a 6L6 to drive an 807 though
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>>> IIRC, the usual driver for an 807 was often a 6AG7 but I'd sure a 6L6
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>>> be fine
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>> Just for grins I got out the RCA tube handbook and compared the plate
>> curves for the 807 and the 6L6. Up to the limits for the 6L6, they are

>> IDENTICAL. The 807 curves go to higher plate voltage and current.
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>> The differences are in the shielding added to the 807 to reduce
>> grid-plate and grid-cathode capacitance, and in the plate support
>> spacers which are ceramic in the 807 to increase the operating voltage
>> rating of the tube (which is also helped by the plate top connection).
>> You can see the added shielding just above and below the plate supports.
>> The 807 is a MUCH better performer at RF than the 6L6, it usually does
>> NOT require neutralization and would have more power gain than the 6L6.
>>
>> At Audio frequencies the two tubes will perform IDENTICALLY within their
>> maximum ratings.
>>
>
> Wow...thanks for the info. They are considerably closer in specs than I
> realized.
>
> Of course, you could run an 807 quite a bit past their official ratings and
> never burn one out.
>
> I recall tuning my transmitter for absolute maximum output...and that
> occurred right around 50watts input.
>
> (probably on 40 meters. I'm sure that on ten meters it would have been a lot
> less)
>
> Ran my 807 rig for years like that.
>
> Don't really know what my 6L6 transmitter would have done...
> just ran it on 40 meters at about 25 watts input...we always just considered
> them to be audio tubes.
>
>
> If I were going to build a tube transmitter today, I'd probably use a 6146B.
>
>
Well the 6L6 has changed over the years, while the 807 never did (except
for the 'W' version). Later 6L6 versions might have changed the outward
appearance of the plate in response to cost cutting and automated
assembly lines, but the internal spacing of the elements remained the
same. If you look on the QST archives (are you an ARRL member?) on line
for those old 'QSL 40' series of articles on home brew transmitters
using the 6L6G tube you can see in the pictures how the plate structure
is the same for the original 6L6G tube as the 807. And if the claims
for this tube in those home brew articles is true, the 6L6 was JUST as
rugged as the 807 in being pushed past it's ratings. Only the 6L6 would
probably arc over at the socket before the plate voltage reached what
the 807 would handle (I've heard of 807's taking over 1000 volts on the
plate just fine!).

The official ICAS ratings for the 807 allow up to 750 volts at 100ma plate current, and there is a typical operation shown at 75 watts input, so at 50w your transmitter wasn't even breaking a sweat yet! A pair of 807's in AB2 (SSB linear) will put out 120w PEP, just about the same as a pair of 6146's. The 6146B officially will do about 135-140w in the same service.

Note that ICAS ratings for the 6L6 were never published, but you can assume that the 6L6 is identical to the 807 EXCEPT for the plate voltage rating, which I would guess is good to 500v or so.

# 2070. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 18:09:22 UTC
From: philo <philo@privacy.net>
Message-ID: <PP6dnYqIjIsTjaHUnZ2dnUVZ_gadnZ2d@ntd.net>
Source record: 3657

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:JWT_k.4856$dc4.2866@bignews2.bellsouth.net...
> philo wrote:
> > "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> > news:k3H_k.4873$UI2.3075@bignews6.bellsouth.net...
> >> philo wrote:
> >>> "Stev eH"
> >>>
> >
<StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdg
> >
fgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyry
> >>> lxybvryvbfbllyxdldf@tfif.co.uk> wrote in message
> >>> news:gh95kc$ats$1@news.albasani.net...
> >>>> JIMMIE wrote:
> >>>>> After years of avoiding morse code I am finally getting into it. the
> >>>>> ideal of operating a very simple transmitter appeals to my junkbox/
> >>>>> trashcan construction mentality.
> >>>>> I am looking for a substitute for a 6L6 that has the plate brought
out
> >>>>> the top. I was trying to build a little Glowbug transmitter but was
> >>>>> having all kinds of problems neutralizing the the thing. I think I
> >>>>> would have better luck if I can separate the grid and plate circuits
> >>>>> from each other. I am considering an 807 as a replacement
Suggestions
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> >>>>> Jimmie
> >>>> An 807 IS a 6L6 with a top cap anode connection. Any of the TV line
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> >>>> well and has an octal base (The sockets for the 807 are rare).
> >>>> 6146 or 2e26 etc work well but will cost you more.
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> >>>> Steve H
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> >>> No way!
> >>>
> >>> Back in the old days I've used both 6L6 and 807's and they are not the
> > same
> >>> tube at all.
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> >>> You could probably use a 6L6 to drive an 807 though
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> >>> IIRC, the usual driver for an 807 was often a 6AG7 but I'd sure a 6L6

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> >> curves for the 807 and the 6L6. Up to the limits for the 6L6, they are
> >> IDENTICAL. The 807 curves go to higher plate voltage and current.
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> >> NOT require neutralization and would have more power gain than the 6L6.
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> >> At Audio frequencies the two tubes will perform IDENTICALLY within
their
> >> maximum ratings.
> >>
> >
> > Wow...thanks for the info. They are considerably closer in specs than I
> > realized.
> >
> > Of course, you could run an 807 quite a bit past their official ratings
and
> > never burn one out.
> >
> > I recall tuning my transmitter for absolute maximum output...and that
> > occurred right around 50watts input.
> >
> > (probably on 40 meters. I'm sure that on ten meters it would have been a
lot
> > less)
> >
> > Ran my 807 rig for years like that.
> >
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> > them to be audio tubes.
> >
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6146B.
> >
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> for the 'W' version). Later 6L6 versions might have changed the outward
> appearance of the plate in response to cost cutting and automated
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> same. If you look on the QST archives (are you an ARRL member?) on line
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> using the 6L6G tube you can see in the pictures how the plate structure
> is the same for the original 6L6G tube as the 807. And if the claims
> for this tube in those home brew articles is true, the 6L6 was JUST as
> rugged as the 807 in being pushed past it's ratings. Only the 6L6 would
> probably arc over at the socket before the plate voltage reached what
> the 807 would handle (I've heard of 807's taking over 1000 volts on the
> plate just fine!).
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> The official ICAS ratings for the 807 allow up to 750 volts at 100ma
> plate current, and there is a typical operation shown at 75 watts input,
> so at 50w your transmitter wasn't even breaking a sweat yet! A pair of
> 807's in AB2 (SSB linear) will put out 120w PEP, just about the same as
> a pair of 6146's. The 6146B officially will do about 135-140w in the
> same service.
>
> Note that ICAS ratings for the 6L6 were never published, but you can
> assume that the 6L6 is identical to the 807 EXCEPT for the plate voltage
> rating, which I would guess is good to 500v or so.

Been a long time...but I am sure the plate voltage on my 807 was at least
600 volts or so.

One thing I also recall, when I had a filter cap short out on a different
set...
is seeing the rectifier tube arc over.

Of course, once the faulty cap. was replaced...the tube worked fine!

## 2071. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 18:55:34 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghh674$bc5$1@news.albasani.net>
Source record: 3658
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Dave Platt wrote:

>> Is it any more efficient to use copper foil or PCB material as the reflector
>> rather than wire?
>
> I believe not.
>
> PCB material will probably be less efficient - standard FR-4
> fiberglass-and-epoxy has significant losses at 2.4 GHz. Also, the
> presence of the FR-4 will change the effective length/diameter of the
> reflector loop... you might have to change the loop diameter to
> compensate.
>

I would think so, at 2.4Ghz there is, no doubt, "only skin effect."
Although, I doubt you would notice a great change in efficiency, it
should be prove-able, at least on paper. The biquad uses a solid
reflector plate for good reason, wire is cheaper/easier to obtain. If
the foil side faces the element, I should doubt any rf gets past it to
the fiberglass-epoxy to be "lost" in efficiency.

> Foil would probably be bit less efficient than wire, assuming that the
> width of the foil was the same as the diameter of the wire - less
> surface area for the current to flow through, and perhaps more current
> crowding to the edges of the foil due to skin effect. It'd also be
> significantly less rugged.
>

My statement above applies here ... all the wire element can "see" is
reflector, with foil.

> Once again, neither of these losses of efficiency is likely to be
> terribly important in this application, but why run the risk?
>
> I'd just stick with solid copper wire of a reasonable diameter/gauge,
> as it'll be electrically efficient and mechanically strong and rigid,
> easy to get, and inexpensive.
>

Tear apart some LNA/satellite feeds to the dish, you will not see them
using wire reflectors there; I think there is good reason.

Just my opinions drawn from my readings/study, looking at commercial
equipment and hands-on ...

One thing I do totally agree with, it WILL work well with just a wire reflector.

Regards,
JS

# 2072. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 19:04:44 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghh6o8$bc5$2@news.albasani.net>
Source record: 3659
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

John Smith wrote:

> ...
> One thing I do totally agree with, it WILL work well with just a wire
> reflector.
>
> Regards,
> JS
>

I built this, actually, a while back. Toss in a director (what is one
more wire?); I found that to be a worthwhile mod ...

Regards,
JS

# 2073. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 19:08:00 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <3ZydnRS1bpFpg6HUnZ2dnUVZ_tfinZ2d@posted.cpinternet>
Source record: 3660

ken scharf wrote:

<snip>
(I've heard of 807's taking over 1000 volts on the
> plate just fine!).
>
> The official ICAS ratings for the 807 allow up to 750 volts at 100ma
> plate current, and there is a typical operation shown at 75 watts input,
> so at 50w your transmitter wasn't even breaking a sweat yet! A pair of
> 807's in AB2 (SSB linear) will put out 120w PEP, just about the same as
> a pair of 6146's. The 6146B officially will do about 135-140w in the
> same service.
<snip>

FWIW, here is a homebrew quad 837/807 linear that does 2kw PEP with 2KV on the plates (I have it but did not homebrew this one):

http://www.cybertheque.org/homebrew/837_linear

I took the photos some years ago using a digital camera with focus and image burn issues; this summer I intend to reshoot these with a better camera.

Michael

## 2074. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 19:54:18 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C56169EA0026DBAEB01AD9AF@news.sf.sbcglobal.net>
Source record: 3661
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> I built this, actually, a while back. Toss in a director (what is one
> more wire?); I found that to be a worthwhile mod ...
>
> Regards,
> JS

Suggestions re. dimensions and location of a director?

Thanks.

# 2075. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 20:36:08 UTC
From: philo <philo@privacy.net>
Message-ID: <RbKdnTKl9fhpr6HUnZ2dnUVZ_judnZ2d@ntd.net>
Source record: 3662

"msg" <msg@_cybertheque.org_> wrote in message
news:3ZydnRS1bpFpg6HUnZ2dnUVZ_tfinZ2d@posted.cpinternet...
> ken scharf wrote:
>
> <snip>
> (I've heard of 807's taking over 1000 volts on the
> > plate just fine!).
> >
> > The official ICAS ratings for the 807 allow up to 750 volts at 100ma
> > plate current, and there is a typical operation shown at 75 watts input,
> > so at 50w your transmitter wasn't even breaking a sweat yet! A pair of
> > 807's in AB2 (SSB linear) will put out 120w PEP, just about the same as
> > a pair of 6146's. The 6146B officially will do about 135-140w in the
> > same service.
> <snip>
>
> FWIW, here is a homebrew quad 837/807 linear that does 2kw PEP with 2KV on
the
> plates (I have it but did not homebrew this one):
>
> http://www.cybertheque.org/homebrew/837_linear
>
> I took the photos some years ago using a digital camera with focus and
image
> burn issues; this summer I intend to reshoot these with a better camera.
>
> Michael

Looks good!

For "on-line" viewing the photos you took look fine on this end.

## 2076. "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 20:48:14 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C561768E0029D229B01AD9AF@news.sf.sbcglobal.net>
Source record: 3663
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Halfway down this page (it's a PDF doc):

<http://www.cablesandconnectors.com/PIX/CC-040.pdf>

the TNC and BNC connectors are advertised as "dual-crimp". What does this mean? "Dual" as in center in crimp and outer shield ferrule crimp?

As opposed to what? Single-crimp? That would be connectors that use the center, solid conductor as the center pin and then crimp the shield ferrule? Or...?

Newly (did you guess?) into small coax connectors and trying to get the terminology straight...

Thanks.

# 2077. Re: Ganged variable capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 20:55:11 UTC
From: terry <tsanford@nf.sympatico.ca>
Message-ID: <17ccfc53-790c-45ea-b9a2-f152c4cb0ed2@j35g2000yqh.googlegroups.com>
Source record: 3664

On Dec 5, 11:52 pm, Dirac1...@aol.com wrote:
> Bob,
> I think I just sent you an email by mistake when I was trying to post
> a reply (sorry about that).  In case anyone else is interested, it
> turns out that the suggestion to cut the wire instead of desoldering
> led me to find that just heating the lug could recreate the short.
> Apparently there is some solder on the inside of the capacitor that
> caused the short after it melted when I was adding the jumper wire.
> Desoldering the wire must have coincidentally reversed this.  I was
> able to heat and tap to get rid of the short and all seems to be
> working now.
> Thanks for the help,
> Rusty.

Good for you: A good find and good practice for looking for the
obvious and non-technical answer to a problem. Very interesting six
section capacitor!

## 2078. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 21:16:03 UTC
From: Dave <dave@dave.dave>
Message-ID: <493c3d13$0$31190$bd467cd0@news.dslextreme.com>
Source record: 3665
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

SparkyGuy wrote:
> Halfway down this page (it's a PDF doc):
>
> <http://www.cablesandconnectors.com/PIX/CC-040.pdf>
>
> the TNC and BNC connectors are advertised as "dual-crimp". What does this
> mean? "Dual" as in center in crimp and outer shield ferrule crimp?
>
> As opposed to what? Single-crimp? That would be connectors that use the
> center, solid conductor as the center pin and then crimp the shield ferrule?
> Or...?
>
> Newly (did you guess?) into small coax connectors and trying to get the
> terminology straight...
>
> Thanks.
>
No soldering. You need the correct Paladin die.

# 2079. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 21:23:33 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <ofqdncHyWvtIo6HUnZ2dnUVZ_hydnZ2d@web-ster.com>
Source record: 3666
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 07 Dec 2008 12:48:14 -0800, SparkyGuy wrote:

> Halfway down this page (it's a PDF doc):
>
> <http://www.cablesandconnectors.com/PIX/CC-040.pdf>
>
> the TNC and BNC connectors are advertised as "dual-crimp". What does
> this mean? "Dual" as in center in crimp and outer shield ferrule crimp?
>
> As opposed to what? Single-crimp? That would be connectors that use the
> center, solid conductor as the center pin and then crimp the shield
> ferrule? Or...?
>
> Newly (did you guess?) into small coax connectors and trying to get the
> terminology straight...
>
> Thanks.

The common BNC "crimp" connectors have you solder the center pin to the center conductor of the cable, then assemble the outer with a crimp.

It works quite well in my experience, but I have yet to do this without distorting the center insulator and having to trim it with an X-acto knife to get it to fit, and I'm sure that in a critical application (like TNC in the GHz) that I'd be creating an unpredictable impedance bump with my hacking. This is bad enough with cables that have solid dielectric; I can only imagine the pain it would be with foam. In a production environment I'd almost certainly want to spring for the necessary crimp tool to crimp the inner, if the quality were there.

(This is opposed to BNC connectors where you thread in a plug to capture the outer conductor between the outer shell and a rubber insert. It also works well, but it is bulky and the connectors cost more. And you're still asked to solder the center pin on, with all of the accompanying center insulator distortion issues).

--
Tim Wescott
Control systems and communications consulting
http://www.wescottdesign.com

Need to learn how to apply control theory in your embedded system?
"Applied Control Theory for Embedded Systems" by Tim Wescott
Elsevier/Newnes, http://www.wescottdesign.com/actfes/actfes.html

# 2080. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 21:37:34 UTC
From: Clifford Heath <no@spam.please.net>
Message-ID: <493c4266$0$9582$afc38c87@news.optusnet.com.au>
Source record: 3667
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Bill wrote:
> looking at the photos it appears to be being used
> with a DVM, depending on how you want to use it you may find an analogue
> meter easier. It will show changes better than a DVM.

The author says he tried that and it didn't work as well:
"I tried connecting the antenna directly to a micro amp moving
coil meter, however there was very little meter deflection from
a Wireless LAN card."

Impedance too low, perhaps?

Clifford Heath.

# 2081. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 21:51:41 UTC
From: "Bruce W. Ellis" <ellis@means.net>
Message-ID: <f2hoj4pfc8g52bhlh1qdupnnjfch31fq47@4ax.com>
Source record: 3668

On Sun, 07 Dec 2008 13:08:00 -0600, msg <msg@_cybertheque.org_> wrote:

>ken scharf wrote:
>
><snip>
>(I've heard of 807's taking over 1000 volts on the
>> plate just fine!).
>>
>> The official ICAS ratings for the 807 allow up to 750 volts at 100ma
>> plate current, and there is a typical operation shown at 75 watts input,
>> so at 50w your transmitter wasn't even breaking a sweat yet! A pair of
>> 807's in AB2 (SSB linear) will put out 120w PEP, just about the same as
>> a pair of 6146's. The 6146B officially will do about 135-140w in the
>> same service.
><snip>
>
>FWIW, here is a homebrew quad 837/807 linear that does 2kw PEP with 2KV on the
>plates (I have it but did not homebrew this one):
>
>http://www.cybertheque.org/homebrew/837_linear
>
>I took the photos some years ago using a digital camera with focus and image
>burn issues; this summer I intend to reshoot these with a better camera.
>
>Michael

I built a 837 "linear" back around 1958. I used mercury vapor
rectifier tubes - love that blue glow. It worked pretty well at about
1200V. I used it mostly for CW and some AM. The 837s were cheap and
pretty rugged. Damn near killed my self on the high voltage so I got
rid of it.

Bruce W0BF

# 2082. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 22:04:16 UTC
From: "Bruce W. Ellis" <ellis@means.net>
Message-ID: <dfhoj4to6ajeuug34ovdj46f076pg65019@4ax.com>
Source record: 3669

On Sat, 06 Dec 2008 16:41:00 -0500, ken scharf
<wa2mzeNOSPAMBOTS@bellsouth.net> wrote:

>Fred McKenzie wrote:
>> In article
>> <9dcff61e-91dd-4b57-8572-908eb16f4117@t3g2000yqa.googlegroups.com>,
>> JIMMIE <jimmie68@gmail.com> wrote:
>>
>>> I am considering an 807 as a replacement
>>
>> Jimmie-
>>
>> Just how simple will this transmitter be? My first novice transmitter
>> was built from an ARRL publication back in the 50s. The specification
>> was for a single 6V6, used as a crystal oscillator with output coupled
>> to the antenna.
>>
>> I found I could get more power with a 6L6 plugged into the same socket.
>> Along the way to getting more power, I found that crystal current would
>> increase to the point where the crystal would fracture!
>>
>> If you use a 807 or 1625, I hope you will have a lower power oscillator
>> driving it. Something like a 6AG7 would make a nice crystal oscillator,
>> and should have sufficient output to drive an 807.
>>
>> 73,
>> Fred
>> K4DII
>The 6AG7 - 807 combo is a classic. E. F. Johnson sold a 50 Watt Novice
>transmitter in the '50's with this tube line up (also a 5R4GY rectifier
>IIRC). Other tubes that have been used as the oscillator/driver were
>the 6CL6, 12BY7, 6GK6, and 5763.

That would be the Johnson Viking Adventurer. I built one in 1955 from
a kit. I later replaced the 807 with a 6146 - didn't make much
difference, actually.

Bruce W0BF

# 2083. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 22:55:55 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghhk9r$sb6$1@news.albasani.net>
Source record: 3670
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

SparkyGuy wrote:
>> I built this, actually, a while back. Toss in a director (what is one
>> more wire?); I found that to be a worthwhile mod ...
>>
>> Regards,
>> JS
>
> Suggestions re. dimensions and location of a director?
>
> Thanks.
>

I believe I tried lengths of a 3% to 5% shorter length with the director, than the drive element (i.e., the one in front of the reflector), settling on a 4% shorter length ... anyway, that is common in HF parasitic arrays ... this is equiv. to a 3-element quad on HF.

I just dug it out and measured it, this is what it appears to be, alright. With a spacing between driven element and director of ~0.2 wavelength, center-to-center.

Regards,
JS

# 2084. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 23:52:21 UTC
From: JIMMIE <JIMMIEDEE123@YAHOO.COM>
Message-ID: <3e69dca0-879f-4d57-b413-5cfea58aee79@x8g2000yqk.googlegroups.com>
Source record: 3671
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Dec 7, 4:23 pm, Tim Wescott <t...@seemywebsite.com> wrote:
> On Sun, 07 Dec 2008 12:48:14 -0800, SparkyGuy wrote:
> > Halfway down this page (it's a PDF doc):
>
> > <http://www.cablesandconnectors.com/PIX/CC-040.pdf>
>
> > the TNC and BNC connectors are advertised as "dual-crimp". What does
> > this mean? "Dual" as in center in crimp and outer shield ferrule crimp?
>
> > As opposed to what? Single-crimp? That would be connectors that use the
> > center, solid conductor as the center pin and then crimp the shield
> > ferrule? Or...?
>
> > Newly (did you guess?) into small coax connectors and trying to get the
> > terminology straight...
>
> > Thanks.
>
> The common BNC "crimp" connectors have you solder the center pin to the
> center conductor of the cable, then assemble the outer with a crimp.
>
> It works quite well in my experience, but I have yet to do this without
> distorting the center insulator and having to trim it with an X-acto
> knife to get it to fit, and I'm sure that in a critical application (like
> TNC in the GHz) that I'd be creating an unpredictable impedance bump with
> my hacking.  This is bad enough with cables that have solid dielectric; I
> can only imagine the pain it would be with foam.  In a production
> environment I'd almost certainly want to spring for the necessary crimp
> tool to crimp the inner, if the quality were there.
>
> (This is opposed to BNC connectors where you thread in a plug to capture
> the outer conductor between the outer shell and a rubber insert.  It also
> works well, but it is bulky and the connectors cost more.  And you're
> still asked to solder the center pin on, with all of the accompanying
> center insulator distortion issues).
>
> --
> Tim Wescott
> Control systems and communications consultinghttp://www.wescottdesign.com
>
> Need to learn how to apply control theory in your embedded system?
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> Elsevier/Newnes,http://www.wescottdesign.com/actfes/actfes.html- Hide quoted text -

>
> - Show quoted text -

Tim, I solder these on the N connectors all the time with no problems. I have an old Weller soldering gun with the tip removed. I wedge the pin between the two electodes on the gun, slide the pin over the tinned center conductor and pull the trigger for a couple of seconds. The pin cools almost instantly preventing deformation of the insulation. Ive been doing this for over 20 years using the same gun. This may take a little practice not to melt the insulation. I remember that it wasnt to bad getting the hang of it.

Jimmie

# 2085. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-07 23:59:01 UTC
From: philo <philo@privacy.net>
Message-ID: <V-2dnWtWO98c_6HUnZ2dnUVZ_oPinZ2d@ntd.net>
Source record: 3672

"Bruce W. Ellis" <ellis@means.net> wrote in message
news:dfhoj4to6ajeuug34ovdj46f076pg65019@4ax.com...
> On Sat, 06 Dec 2008 16:41:00 -0500, ken scharf
> <wa2mzeNOSPAMBOTS@bellsouth.net> wrote:
>
> >Fred McKenzie wrote:
> >> In article
> >> <9dcff61e-91dd-4b57-8572-908eb16f4117@t3g2000yqa.googlegroups.com>,
> >> JIMMIE <jimmie68@gmail.com> wrote:
> >>
> >>> I am considering an 807 as a replacement
> >>
> >> Jimmie-
> >>
> >> Just how simple will this transmitter be? My first novice transmitter
> >> was built from an ARRL publication back in the 50s. The specification
> >> was for a single 6V6, used as a crystal oscillator with output coupled
> >> to the antenna.
> >>
> >> I found I could get more power with a 6L6 plugged into the same socket.
> >> Along the way to getting more power, I found that crystal current would
> >> increase to the point where the crystal would fracture!
> >>
> >> If you use a 807 or 1625, I hope you will have a lower power oscillator
> >> driving it. Something like a 6AG7 would make a nice crystal
oscillator,
> >> and should have sufficient output to drive an 807.
> >>
> >> 73,
> >> Fred
> >> K4DII
> >The 6AG7 - 807 combo is a classic. E. F. Johnson sold a 50 Watt Novice
> >transmitter in the '50's with this tube line up (also a 5R4GY rectifier
> >IIRC). Other tubes that have been used as the oscillator/driver were
> >the 6CL6, 12BY7, 6GK6, and 5763.
>
> That would be the Johnson Viking Adventurer. I built one in 1955 from
> a kit. I later replaced the 807 with a 6146 - didn't make much
> difference, actually.
>
> Bruce W0BF

Yep, that's what I started out with. Bought my Adventurer used back in 1964
along with an HQ-110c.

When I got my General ticket I got a nice drifty Knight Kit VFO.

My antenna relay was taken from an old pinball machine!

My best contact was Ascension Island . Africa on a 40 meter CW..

I used a
wire vertical...
that was not terribly vertical <G>

# 2086. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 00:05:09 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <12f9873b-6e91-42a5-8591-8c7c09d14a4c@d23g2000yqc.googlegroups.com>
Source record: 3673

On Dec 5, 11:28 am, Tim Wescott <t...@seemywebsite.com> wrote:
> On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:
> > After years of avoiding morse code I am finally getting into it. the
> > ideal of operating a very simple transmitter appeals to my junkbox/
> > trashcan construction mentality.
> > I am looking for a substitue for a 6L6 that has the plate brought out
> > the top. I was trying to build a little Glowbug transmitter but was
> > having all kinds of problems neutralizing the the thing. I think I would
> > have better luck if I can separate the grid and plate circuits from each
> > other. I am considering an 807 as a replacement Suggestions would be
> > appreciated.
>
> > Jimmie
>
> Have you considered a 6L6 with careful shielding at the socket?  IIRC the
> pins that neighbor the plate pin would be at RF potential; you could put
> a big, flat, high-value ceramic right between those socket pins to shield
> the grid, and possible even extend the shield out if you were willing to
> hand-make a cap from copper strip and Kapton tape.
>
> It's kinda heroic measures to take on a tube that's more expensive now
> than it's "high-tech" RF brethren, but if you just gotta have that metal-
> tube look it may do the trick.
>
> --
> Tim Wescott
> Control systems and communications consultinghttp://www.wescottdesign.com
>
> Need to learn how to apply control theory in your embedded system?
> "Applied Control Theory for Embedded Systems" by Tim Wescott
> Elsevier/Newnes,http://www.wescottdesign.com/actfes/actfes.html

Thanks Tim, I rplaced the 6L6 with a 6DQ6 and all is right with the
world on this end. Im putting out about 40 watts on 80M.
My next project may be building a little super rengerative receiver.
Im trying to see just how little I can get by with and still have a
productive station.

Jimmie

# 2087. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 05:40:38 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghic0l$i0j$1@news.albasani.net>
Source record: 3674
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

SparkyGuy wrote:

> ...
> Suggestions re. dimensions and location of a director?
>
> Thanks.
>

Had company today, been in and out all day ... sorry I didn't offer more.

A wavelength at 2.4Ghz will be approx. 12cm, half-wave ~6cm, 1/4 wave
~3cm. (with a very thin wire 1/2 wave monopole-omni-element I find
~12.25cm works for me, element dia. will affect this, as other factors ...)

Anyway, I looked though my old emails for something a friend sent me,
thought if you were interested in the 2.4g fsm, you might be interested
in this, if nothing else, just because the dude is so complete!:

http://www.users.bigpond.com/darren.fulton/yagi/13_element_yagi_antenna_for_2.htm

You will notice, he uses a plate reflector ...

Regards,
JS

## 2088. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 07:23:58 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C5620B8E004CBE0BB01AD9AF@news.sf.sbcglobal.net>
Source record: 3675
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> I believe I tried lengths of a 3% to 5% shorter length with the
> director, than the drive element (i.e., the one in front of the
> reflector), settling on a 4% shorter length ...

So about 26.8mm square?

> With a spacing between driven element and director of ~0.2
> wavelength, center-to-center.

So the director should be 25 mm forward (toward the uwave source) of the
driven element? (3e8 / 2.4e9) x 0.2 = ~25mm

Do these numbers look right?

Thanks.

# 2089. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 07:38:07 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <d3jpj4p60dn5ltdno9qko2uisfi2ehnhgd@4ax.com>
Source record: 3676
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 07 Dec 2008 21:40:38 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>A wavelength at 2.4Ghz will be approx. 12cm, half-wave ~6cm, 1/4 wave
>~3cm. (with a very thin wire 1/2 wave monopole-omni-element I find
>~12.25cm works for me, element dia. will affect this, as other factors ...)
>
>Anyway, I looked though my old emails for something a friend sent me,
>thought if you were interested in the 2.4g fsm, you might be interested
>in this, if nothing else, just because the dude is so complete!:
>
>http://www.users.bigpond.com/darren.fulton/yagi/13_element_yagi_antenna_for_2.htm
>
>You will notice, he uses a plate reflector ...
>
>Regards,
>JS

I also noticed that he cut his elements to a precision of 0.1mm. That
would be correct if the boom were an insulator or the elements were
inserted in insulating sleeves. However, since the 10mm square boom
is metal and effectively "shorts" part of each element, the actual
element length includes part of the diameter of the boom, thus adding
approximately 5mm to each element length (not including the reflector
and driven element). A VSWR sweep test would have shown the problem.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2090. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 08:02:45 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghikb2$pia$1@news.albasani.net>
Source record: 3677
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

SparkyGuy wrote:
>> I believe I tried lengths of a 3% to 5% shorter length with the
>> director, than the drive element (i.e., the one in front of the
>> reflector), settling on a 4% shorter length ...
>
> So about 26.8mm square?
>
>> With a spacing between driven element and director of ~0.2
>> wavelength, center-to-center.
>
> So the director should be 25 mm forward (toward the uwave source) of the
> driven element? (3e8 / 2.4e9) x 0.2 = ~25mm
>
> Do these numbers look right?
>
> Thanks.
>

My elements are made from #14 bare copper wire. It is difficult to measure each side, individually, when constructing the antenna. Better to cut the wire to 1 wavelength, then make your bends forming it into a square. Of course, every attempt possible should be made to keep each side 1/4 of this length, exactly.

In measuring the one before me, which I constructed, this total length, about the quad, is ~12.5cm.

However, here is a calculator I referenced in my constructions:

It is a java application, you must have java on your computer. Let me know if you can't access it and I will give you the figures it spits out, 2.4ghz = 2400mhz. Just let me know what wifi channel you wish to center on (frequency.)

Regards,
JS

## 2091. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 08:04:08 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghikdj$pia$2@news.albasani.net>
Source record: 3678
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

John Smith wrote:

> ...
> However, here is a calculator I referenced in my constructions:
>
> It is a java application, you must have java on your computer. Let me
> know if you can't access it and I will give you the figures it spits
> out, 2.4ghz = 2400mhz. Just let me know what wifi channel you wish to
> center on (frequency.)
>
> Regards,
> JS

Well, da! It would help if I cut loose with the URL. <sheepish smile>

http://www.n6mrx.com/Antenna/Cubical-Quad1.htm

Regards,
JS

## 2092. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 08:23:16 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghilhh$qmp$1@news.albasani.net>
Source record: 3679
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:

> ...
> I also noticed that he cut his elements to a precision of 0.1mm. That
> would be correct if the boom were an insulator or the elements were
> inserted in insulating sleeves. However, since the 10mm square boom
> is metal and effectively "shorts" part of each element, the actual
> element length includes part of the diameter of the boom, thus adding
> approximately 5mm to each element length (not including the reflector
> and driven element). A VSWR sweep test would have shown the problem.
>

I have always used #8 wire as a boom on ghz yagis' (constructed a 7 element once.) Since the boom is at a current antinode (voltage node), I ignored the boom.

The boom you mention is rather LARGE, give the freqs in question.

One of my next projects is a GOOD VSWR meter for ghz ... unfortuantly, on the list of priorities here, it is low on the list ... :-(

I have just tended to take the % signal readings on the chans as good enough, and trimmed my antennas accordingly. I know, this does NOT take into account the functioning/power-fluctuations/antenna(s)/etc. of the AP over these ranges ...

But, excellent point, glad you mentioned it ... but you are right, my elements end up being filed down a bit from the figures the calculator spits out ...

Warm regards,
JS

## 2093. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 08:33:16 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <14kpj49614u4jrjm92sg5q0pqs5qapg3rv@4ax.com>
Source record: 3680
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 08 Dec 2008 08:37:34 +1100, Clifford Heath
<no@spam.please.net> wrote:

>Bill wrote:
>> looking at the photos it appears to be being used
>> with a DVM, depending on how you want to use it you may find an analogue
>> meter easier. It will show changes better than a DVM.
>
>The author says he tried that and it didn't work as well:
>"I tried connecting the antenna directly to a micro amp moving
>coil meter, however there was very little meter deflection from
>a Wireless LAN card."
>
>Impedance too low, perhaps?
>
>Clifford Heath.

Maybe, but more likely, not enough RF to do anything useful with an
un-amplified meter.

What's missing from everyone's posting is what they plan to do with
this field strength meter.

Let's play with the numbers. The average wi-fi access point belches
about +12dBm (32 mw) RF into an antenna with perhaps 2dBi gain. The
FSM has a gain of perhaps 0dB. At a distance of about 3 meters (10ft)
the path loss at 2.4GHz is about 50dB which will deliver about -30dBm
to the diode. On the most sensitive voltage range, the DVM has an
input impedance of at least 1Mohm and can be treated like an open
circuit load to the detector.

-30dBm into 50 ohms is 0.224 vrms. Transforming linearly from 50 ohm
reference to perhaps 150 ohms loop antenna impedance yields about
600mv rms. (Note: I know this is a bad guess but it's midnight and
I'm tired). Resonating the loop probably raises the impedance even
higher, thus resulting in even more rectified voltage.

The resultant DC voltage will be about the same at about 600mv DC.
However, for wi-fi use, the xmit duty cycle is quite low, sending just
beacons, when there is no traffic moving. The 1000pf cap will need to
be paralleled with a much larger cap in order to form a usable peak
detector.

So, with a high imput impedance DVM the antenna and detector is quite
efficient and can generate quite a bit of voltage. However, when the

DVM is replaced with a non-amplified meter, the relatively low impedance of the meter shorts out the diode and signifigantly reduces the Q of the resonant loop antenna, resulting in much lower detected voltage.

I've built several transmitter hunt "sniffers" using almost exactly the same circuit, except that I use a hot carrier Schottky diode for the RF detector, and the cheapest Harbor Freight DVM (because it always gets destroyed or lost during the hunt). For 2.4GHz, I use a dish antenna, RF amplifier, step-up xformer (coax balun), diode detector, and DVM.

I also made a really ugly hack that uses a satellite TV signal meter.
<http://www.sadoun.com/Sat/Products/Accessories/Meters/SF95L-DSS-FTA-Satellite-Signal-meter.htm>
These work from about 900 to 1800MHz with a minimum detectable meter sensitivity of about -70dBm. They are comatose at 860 (cellular) and 2.4GHz but are great for 900 and 1900MHz (PCS) sniffing. The input port is connected to a 900MHz or 1.2GHz antenna of any sorts. The output goes to a 75 ohm load and a 12V battery (gel cell) through an RF choke.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2094. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 08:48:46 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <SM-dnetizfzOQqHUnZ2dnUVZ_oDinZ2d@posted.cpinternet>
Source record: 3681
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

John Smith wrote:

> Jeff Liebermann wrote:
>
>> ...
>> I also noticed that he cut his elements to a precision of 0.1mm. That
>> would be correct if the boom were an insulator or the elements were
>> inserted in insulating sleeves. However, since the 10mm square boom
>> is metal and effectively "shorts" part of each element, the actual
>> element length includes part of the diameter of the boom, thus adding
>> approximately 5mm to each element length (not including the reflector
>> and driven element). A VSWR sweep test would have shown the problem.
>>
>
> I have always used #8 wire as a boom on ghz yagis' (constructed a 7
> element once.) Since the boom is at a current antinode (voltage node),
> I ignored the boom.
>
> The boom you mention is rather LARGE, give the freqs in question.
>
> One of my next projects is a GOOD VSWR meter for ghz ... unfortuantly,
> on the list of priorities here, it is low on the list ... :-(

What about surplus directional couplers and a bolometer set (various
military versions used to be quite affordable)? Used to show up at
hamfests regularly too, covered 1 to 20 GHz or so in the kit; sorry
I forget the AN number at the moment, but it came with half a dozen
directional couplers for the various bands and lots of adapters.

Michael

## 2095. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 08:57:58 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <i0npj4lkqhqthmvacoc41fa4h6g082vb12@4ax.com>
Source record: 3682
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 08 Dec 2008 00:23:16 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>One of my next projects is a GOOD VSWR meter for ghz ... unfortuantly,
>on the list of priorities here, it is low on the list ... :-(

<http://pe2er.nl/wifiswr/>

I've built several. They work nicely and are a very important tool.
My main inspiration was blowing up my Wiltron Model something SWR
bridge and discovering the exhorbitant cost of a repair or
replacement. The designs are sufficiently similar that I can
substitute. Of course, it's not flat over many decades of bandwidth,
but for fairly narrow bands, it's quite adequate.

>I have just tended to take the % signal readings on the chans as good
>enough, and trimmed my antennas accordingly. I know, this does NOT take
>into account the functioning/power-fluctuations/antenna(s)/etc. of the
>AP over these ranges ...

I have a handy distant reference signal for 2.4GHz. It's line of
sight and creates no Fresnel Zone issues, so it's useful for antenna
testing. I start with my "standard" gain panel antenna and take a
measurement. I then take the antenna under test, and compare. I
rarely make an absolute level measurement. It's always relative to
some other antenna of known characteristics.

The only problem is that I have to climb onto my roof to do the
measuring. I'm currently at the tail end of radiation oncology (no
big deal), which makes me kinda tired. I find myself somewhat tipsy
on the roof, so no antenna measurements for a few more weeks. One
might also suggest that it affects my math and memory, but they're
currently just as bad as always.

>But, excellent point, glad you mentioned it ... but you are right, my
>elements end up being filed down a bit from the figures the calculator
>spits out ...

Suggestion: I always build a 3 element yagi first. Just the
director, driven element, and reflector. With the antenna on the
bench (after clearing off the chain saw and bicycle repair debris), I
run a fairly wide sweep using a reflection coefficient bridge or VSWR
bridge to an oscilloscope. I then trim the various elements for
resonance. My sweeper has a marker generator, but an external
generator (or wi-fi trash generator) can also be used. Adding
additional elements does change the tuning a bit, but the really big

frequency determining elements are the first 3 elements.
<http://802.11junk.com/jeffl/pics/home/slides/lab.html>
Incidentally, don't forget the mounting bracket. I just hate it when
I prototype an antenna, and then find that the bracket, radome,
potting foam, serial number sticker, or other irrelevent hardware
detune the antenna.

Another trick that I use with wire rod type of antennas is to thread
the end of the rods. Attached to these are threaded standoffs. These
can be rotated to adjust the length of the elements. Also, don't
forget to round off or chamfer the ends of each element to improve the
bandwidth.

1AM. Time to give up before I start babbling nonsense.

>Warm regards,
>JS

Bah-Humbug (T'is the season).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

## 2096. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 08:59:16 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghinl1$shf$1@news.albasani.net>
Source record: 3683
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:

> ...
> Maybe, but more likely, not enough RF to do anything useful with an
> un-amplified meter.
>
> What's missing from everyone's posting is what they plan to do with
> this field strength meter.
>
> Let's play with the numbers. The average wi-fi access point belches
> about +12dBm (32 mw) RF into an antenna with perhaps 2dBi gain. The

Hmmm, max power for a wifi router is 1 watt!

Here is a full power one:

http://www.wirelessnetworkproducts.com/index.asp?PageAction=VIEWPROD&ProdID=1425

The router I presently use is "belching" 500mw into a 7.5db antenna
(well, I might question the 7.5db ...)

Throw out your access point man! Get a decent one ...

Regards,
JS

# 2097. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 09:18:59 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <hnopj4h6727gdtsjet4qke6o1j6lu0gkqa@4ax.com>
Source record: 3684
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 08 Dec 2008 00:59:16 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>Jeff Liebermann wrote:
>
>> ...
>> Maybe, but more likely, not enough RF to do anything useful with an
>> un-amplified meter.
>>
>> What's missing from everyone's posting is what they plan to do with
>> this field strength meter.
>>
>> Let's play with the numbers. The average wi-fi access point belches
>> about +12dBm (32 mw) RF into an antenna with perhaps 2dBi gain. The

>Hmmm, max power for a wifi router is 1 watt!

I said "average wi-fi access point". 1 watt routers are relatively
rare among the common home wireless routers. Most run about 32mw.
Some Buffalo models run about 250mw. 2wire 2701 can run up to about
450mw. I think Enginius also makes one at around 1 watt.

The problem with this is what I call the "alligator" effect. An
alligator is an animal with a big mouth and small ears. Running a 1
watt access point will make the xmitter heard over a much wider area
than it can hear the responses from the clients. Unless the other end
of the link (i.e. client radios) are also running the same high power
level, the range will be limited by the clients tx power. In other
words, the system gain and power levels in both directions have to be
evenly matched to avoid turning the high power access point into what
I consider to be no better than a jamming transmitter. If you need a
slogan, you should use "only as much power as necessary" which doesn't
mean crank it up to the max. Please print this slogan on a large sign
and plaster it in front of your desk until the meaning sinks in. Also,
note that most modern communications technologies includes automatic
transmit power control (usually based on RX SNR or BER) to prevent
alligators and systems like yours from becoming a problem.

>Here is a full power one:
>http://www.wirelessnetworkproducts.com/index.asp?PageAction=VIEWPROD&ProdID=1425
>The router I presently use is "belching" 500mw into a 7.5db antenna
>(well, I might question the 7.5db ...)

Turn down the power to about 100mw. The antenna is fine because it
results in a symmetrical improvement in system gain. Also, give

yourself a slap on the wrist, repent your evil ways, and pray for
forgiveness.

>Throw out your access point man! Get a decent one ...

You haven't seen my office. I never throw anything away.

>Regards,
>JS
--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2098. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 09:51:53 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghiqnm$aq$1@news.albasani.net>
Source record: 3685
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:

> ...
> Turn down the power to about 100mw. The antenna is fine because it
> results in a symmetrical improvement in system gain. Also, give
> yourself a slap on the wrist, repent your evil ways, and pray for
> forgiveness.
>
>> Throw out your access point man! Get a decent one ...
>
> You haven't seen my office. I never throw anything away.
>
>> Regards,
>> JS

Yes, my AP's software allows for power control. Indeed, the AP will,
automatically, only supply enough power to make a, almost, error free
transmission link.

Having one side of transmission link error free is MUCH superior to have
both sides error prone!

However, although I have a pocketfull of various USB dongles, my
external USB wifi "card" is the highest output I could find which is
cost effective (@ 500mw.) External USB being powered off the USB buss
must stay 500ma (@ 5v) or below, total consumption. And, would more
than allow for a 1 watt USB dongle.

Here is a USB card to match my router:

http://www.data-alliance.net/servlet/the-90/802.11g-USB-802.11b-802.11n/Detail

Try one, you'll like it, "Mikey does!" <grin>

Regards,
JS

## 2099. Millen items anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 09:58:51 UTC
From: Theo <theodore.twyler@ntlworld.com>
Message-ID: <zd6%k.3779$3M4.3045@newsfe20.ams2>
Source record: 3686

I am looking for the following items:-

Two Millen 64456 456kc Interstage I.F. Transformers
One Millen 64454 456kc I.F. Diode Transformer
One Millen 65456 456kc BFO Assembly

Any assistance would be gratefully accepted.

Theo

# 2100. Re: testi-testi

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 10:01:58 UTC
From: Theo <theodore.twyler@ntlworld.com>
Message-ID: <vg6%k.3804$3M4.1132@newsfe20.ams2>
Source record: 3687
Cross-posted to: sfnet.harrastus.autot.maahantuonti,sfnet.harrastus.tanssi,sfnet.tori.myydaan.muut,rec.radio.amateur.homebrew

Have you Finnished?

## 2101. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 10:07:11 UTC
From: Theo <theodore.twyler@ntlworld.com>
Message-ID: <pl6%k.3844$3M4.1113@newsfe20.ams2>
Source record: 3688

You could try the 5B/254M which is a smaller and slimmer version of the 807.

## 2102. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 10:15:42 UTC
From: Theo <theodore.twyler@ntlworld.com>
Message-ID: <nt6%k.3910$3M4.2160@newsfe20.ams2>
Source record: 3689

"JIMMIE" <jimmie68@gmail.com> wrote in message
news:12f9873b-6e91-42a5-8591-8c7c09d14a4c@d23g2000yqc.googlegroups.com...
.
My next project may be building a little super rengerative receiver.

You mean a regenerative receiver, surely?

# 2103. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 13:24:56 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <5f35c586-832d-4514-a23c-65acd76a8fef@v15g2000yqn.googlegroups.com>
Source record: 3690

On Dec 8, 5:15 am, "Theo" <theodore.twy...@ntlworld.com> wrote:
> "JIMMIE" <jimmi...@gmail.com> wrote in message
>
> news:12f9873b-6e91-42a5-8591-8c7c09d14a4c@d23g2000yqc.googlegroups.com...
> .
> My next project may be building a little super rengerative receiver.
>
> You mean a regenerative receiver, surely?

Yes one should not type and carry on a conversation with thier wife
at the same time.

Jimmie

## 2104. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 16:24:55 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C5628A57006A7532B01AD9AF@news.sf.sbcglobal.net>
Source record: 3691
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> http://www.n6mrx.com/Antenna/Cubical-Quad1.htm

Thanks for the link. The calculator works for me.

One remaining Q: how do I take into account the "pigtails" of the driven element? A nice square loop is nice, but I've got to connect it to the (relatively) big diode, and this requires a bit more wire from the loop to the diode (on the + side of the loop) and to the meter connector (on the - side). Do I include these wire lengths in the loop size calculation? Or ignore them?

Or does the 1000pF cap effectively terminate the loop (re. size)?

Thanks.

# 2105. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 16:25:30 UTC
From: "Bruce W. Ellis" <ellis@means.net>
Message-ID: <kciqj4h7vc1pvfm2526ck87fhspcojlrtd@4ax.com>
Source record: 3692

On Mon, 8 Dec 2008 10:07:11 -0000, "Theo"
<theodore.twyler@ntlworld.com> wrote:

>You could try the 5B/254M which is a smaller and slimmer version of the 807.
>
Somewhat OT.. Oldtimers refer to a bottle of beer as an 807. Never
heard of a 6L6GT referred to that way. I suppose a whiskey bottle
could be called an 813.

Time for a couple of 807's.

Bruce W0BF

# 2106. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 16:34:06 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <_v6dnSH6xpnk0aDUnZ2dnUVZ_h2dnZ2d@web-ster.com>
Source record: 3693

ken scharf wrote:
> Tim Wescott wrote:
>> On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:
>>
>>> After years of avoiding morse code I am finally getting into it. the
>>> ideal of operating a very simple transmitter appeals to my junkbox/
>>> trashcan construction mentality.
>>> I am looking for a substitue for a 6L6 that has the plate brought out
>>> the top. I was trying to build a little Glowbug transmitter but was
>>> having all kinds of problems neutralizing the the thing. I think I would
>>> have better luck if I can separate the grid and plate circuits from each
>>> other. I am considering an 807 as a replacement Suggestions would be
>>> appreciated.
>>>
>>> Jimmie
>>
>> Dunno if it's been mentioned yet -- 2E26. The 807 is _not_ a 6L6 in a
>> different envelope -- it's quit arguably the 6L6's big brother, but
>> it's got different ratings; it could probably be shoe-horned into a
>> circuit designed for the 6L6, but you'd be missing out on about 6dB of
>> final output power.
>>
> The 807 IS a 6L6G with a 5 pin base and the plate connected to the top.
> The published ratings of the 6L6G look different than the 807 because of
> their intended use. ICAS ratings for the 6L6G were never published.
> Also the 807 has additional shielding and insulation over the 6L6G that
> make it usable at higher frequencies and voltages than the 6L6G. Most
> 807's have ceramic spaces to support the plate which are lacking in the
> 6L6G. But make no mistake about it, the two tubes share the IDENTICAL
> cathode, grids, and plate structures.
>
> The 6BG6G tv sweep tube IS an 807 with an octal base. It has the same
> ceramic plate supports, but lacks the extra rf shielding.
>
> The 1625 is an 807 with a 12.6 volt heater and a large (same as type
> '59) 7 pin base.
>
> The type 1614 is a metal tube based on the 6L6. It is a transmitting
> version, and probably has additional shielding. Otherwise its internal
> structure is the same as the 6L6 metal type.
>
> The type 1619 is sorta kinda a 6L6 with a directly heated 2.5v cathode.
> Same metal bulb as the 6L6. Specs' are different due to the different
> element spacing thanks to the filament cathode. This tube is often

> triode connected to replace 45's and 2A3's in old radios with a socket
> adapter.
>
> As a result the of the construction differences regarding shielding, the
> 807 often would NOT need neutralization while 6L6G's and 6BG6G tubes
> used as rf power amps do.
>
>
> The 6L6GA was identical to the 6L6G except that the bulb shrunk from an
> ST16 to an ST14 size. The 6L6GB was identical except for the bulb
> changing again to a T14. The 6L6GC is a totally different bottle with
> higher plate and screen dissipation and plate voltage ratings. The
> 6L6GC was said to be a plug in replacement for the older 6L6 tubes, but
> RCA kept the 6L6GB around for a while anyway. In fact a bias
> re-adjustment was a good idea when replacing an older 6L6 with the 'GC
> version if a cathode bias resistor wasn't used.
>
I bow to your superior knowledge.

How do you know? Time spent busting tubes and looking inside? Old-time service and/or circuit design experience? Experience building tubes?

I'd love to see a detailed family tree for some of the more popular tube types.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 2107. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 16:35:24 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <_v6dnSD6xpla0aDUnZ2dnUVZ_h2dnZ2d@web-ster.com>
Source record: 3694

ken scharf wrote:
> Tim Wescott wrote:
>> On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:
>>
>>> After years of avoiding morse code I am finally getting into it. the
>>> ideal of operating a very simple transmitter appeals to my junkbox/
>>> trashcan construction mentality.
>>> I am looking for a substitue for a 6L6 that has the plate brought out
>>> the top. I was trying to build a little Glowbug transmitter but was
>>> having all kinds of problems neutralizing the the thing. I think I would
>>> have better luck if I can separate the grid and plate circuits from each
>>> other. I am considering an 807 as a replacement Suggestions would be
>>> appreciated.
>>>
>>> Jimmie
>>
>> Dunno if it's been mentioned yet -- 2E26. The 807 is _not_ a 6L6 in a
>> different envelope -- it's quit arguably the 6L6's big brother, but
>> it's got different ratings; it could probably be shoe-horned into a
>> circuit designed for the 6L6, but you'd be missing out on about 6dB of
>> final output power.
>>
> The 807 IS a 6L6G with a 5 pin base and the plate connected to the top.
> The published ratings of the 6L6G look different than the 807 because of

-- snip --

> The type 1614 is a metal tube based on the 6L6. It is a transmitting
> version, and probably has additional shielding. Otherwise its internal
> structure is the same as the 6L6 metal type.
>
How is the 6L6 metal type different internally from the 6L6G?

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 2108. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 17:06:39 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <49jqj4lha0fn08npu3kn3va9b6l83jvl0l@4ax.com>
Source record: 3695
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 08 Dec 2008 01:51:53 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>Jeff Liebermann wrote:
>
>> ...
>> Turn down the power to about 100mw. The antenna is fine because it
>> results in a symmetrical improvement in system gain. Also, give
>> yourself a slap on the wrist, repent your evil ways, and pray for
>> forgiveness.
>>
>>> Throw out your access point man! Get a decent one ...
>>
>> You haven't seen my office. I never throw anything away.
>>
>>> Regards,
>>> JS

>Yes, my AP's software allows for power control. Indeed, the AP will,
>automatically, only supply enough power to make a, almost, error free
>transmission link.

I beg to differ. Unless I missed something in my post-midnight scan
of the specs, the wireless router's TX power is set and forget. If it
receives an extremely strong signal level report in the 802.11
management packet, the power remains the same. The ability to do
power control is there (because each device reports its RX signal
strength and SNR) but very few access points even try.

>Having one side of transmission link error free is MUCH superior to have
>both sides error prone!

I beg to differ. You're creating un-necessary interference. Let's
play with the numbers.

The commodity wireless router belches about +12dBm. Yours is
allegedly +27dBm. Range doubles for every 6dB increase in TX power.
Therefore, your TX range is:
(27 - 12) / 6 = 7.5
time more than would be with a commodity wireless router. In terms of
coverage area, that's:
7.5^2 = 56.3
times the area. Assuming a uniform density of WLAN users in your
vicinity, you're trashing 56.3 times as many users or systems as
necessary.

You're also partly wrong about asymmetrical systems being superior.
The transition between a fairly good BER or PER (packet error rate) is
rather abrupt. What happens is that the AP simply slows down the data
rate until the PER improves. Since the connection speed can be
different in each direction, you'll get very good speed in one
direction, and probably very slow speed in the other. In addition,
things go insane above 54Mbits/sec connection speed. You might have
enough signal to go faster than 54Mbits/sec in one direction, but if
it's lacking in the other direction, the AP will simply revert to
802.11g and limit the speed in the stronger direction to 54Mbits/sec.
That's not a problem as few systems can operate reliably at
54Mbits/sec beyond a few meters range and in the presence of
interference.

Meanwhile, you're operating an alligator, jamming 56 times as many
users as necessary, and polluting the airwaves with your overpowered
xmitter. It's like operating a kilowatt xmitter in the middle of the
QRP frequencies. Your stuff gets through, but nobody else's. I
suggest you do the math, repent your evil ways, offer sacrifice to the
radio gods on the hibachi, slap yourself on the wrist several times
for penitence, and stop playing with the dark side.

>However, although I have a pocketfull of various USB dongles, my
>external USB wifi "card" is the highest output I could find which is
>cost effective (@ 500mw.) External USB being powered off the USB buss
>must stay 500ma (@ 5v) or below, total consumption. And, would more
>than allow for a 1 watt USB dongle.

You would do better with a directional antenna, so as to not both
pickup and deliver interference from other systems. Antennas with
gain also improve the system gain in both directions, thus preventing
the creation of an alligator.

>Here is a USB card to match my router:
>http://www.data-alliance.net/servlet/the-90/802.11g-USB-802.11b-802.11n/Detail
>
>Try one, you'll like it, "Mikey does!" <grin>

Nope. Instead, I was instrumental in convincing at least one mesh
wi-fi vendor to reduce their poletop TX power, as they were causing
most of their own interference. Asymmetric systems suck.

>Regards,
>JS

Bah-Humbug (T'is the season).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2109. FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 17:07:22 UTC
From: mjsilva@embarqmail.com
Message-ID: <4fcc0d8f-5a41-46e9-be38-c1619125043f@y18g2000yqn.googlegroups.com>
Source record: 3696
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I had this idea a while back, to thin out my stuff in what I think is
a useful and interesting way. Along the way I ended up having to buy
a bunch of new stuff as well (e.g. the brand new tune and load
variable caps). So take a look - might be a fun way to spend some
winter evenings.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771

73,
Mike, KK6GM

# 2110. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 17:08:03 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <4cd6853b-e2a0-4efc-a938-a481af030f3c@v15g2000yqn.googlegroups.com>
Source record: 3697

On Dec 4, 9:26 pm, "NoSPAM" <unkn...@nospam.org> wrote:
> "Stev eH"
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxd...@tfif.co.uk>
> wrote in messagenews:gh9kfq$ueh$1@news.albasani.net...
>
> > My first amp had 3 PL519s with a lethal power supply using a voltage
> > tripp{l}er direct off the 240V mains, heaters were direct off mains via a
> > 1n5406 diode. It's still up in the parents loft somewhere, must dig it
> > out over the holidays and give it a try....
>
> > Steve H
>
> Do you realize that the RMS value of half-wave rectified AC is not one half
> of the applied RMS voltage but rather 0.707 of the applied RMS voltage.  So
> your three 40 volt filament PL519s actually saw about 56 volts RMS across
> each filament.

Hey OM
I beg to differ. As any casual observer can see that peek is 330V and
the average would be 0.363 of the peak so that's 40 volts in my
calculator all day long, for a 3 tube string.

Lets take a square wave, the average would be 0.5 of peek, far lower
than 0.707 you are used to using. Even if it was full wave 120 cycle
dc, the average would only be 0.636 still lower than 0.707.

I tell you what. Take a diode and rectify the mains with it and
measure the DC voltage with a DVM, VTVM or a VOM and 0.363 of peak is
what you will get for a DC voltage on that meter. Or do the real
integral of the dv/dt and see for yourself.

The TV repair business I was in manufacturers put 50volt peak on a CRT
6.3volt filament, the average voltage was 6.3 volts. Lets see you RMS
that one.

73 OM

n8zu

## 2111. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 17:24:28 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <08156e7a-1ba3-40ea-bf98-ed89a51b1f63@x8g2000yqk.googlegroups.com>
Source record: 3698
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Dec 7, 6:52 pm, JIMMIE <JIMMIEDEE...@YAHOO.COM> wrote:
> On Dec 7, 4:23 pm, Tim Wescott <t...@seemywebsite.com> wrote:
>
>
>
> > On Sun, 07 Dec 2008 12:48:14 -0800, SparkyGuy wrote:
> > > Halfway down this page (it's a PDF doc):
>
> > > <http://www.cablesandconnectors.com/PIX/CC-040.pdf>
>
> > > the TNC and BNC connectors are advertised as "dual-crimp". What does
> > > this mean? "Dual" as in center in crimp and outer shield ferrule crimp?
>
> > > As opposed to what? Single-crimp? That would be connectors that use the
> > > center, solid conductor as the center pin and then crimp the shield
> > > ferrule? Or...?
>
> > > Newly (did you guess?) into small coax connectors and trying to get the
> > > terminology straight...
>
> > > Thanks.
>
> > The common BNC "crimp" connectors have you solder the center pin to the
> > center conductor of the cable, then assemble the outer with a crimp.
>
> > It works quite well in my experience, but I have yet to do this without
> > distorting the center insulator and having to trim it with an X-acto
> > knife to get it to fit, and I'm sure that in a critical application (like
> > TNC in the GHz) that I'd be creating an unpredictable impedance bump with
> > my hacking.  This is bad enough with cables that have solid dielectric; I
> > can only imagine the pain it would be with foam.  In a production
> > environment I'd almost certainly want to spring for the necessary crimp
> > tool to crimp the inner, if the quality were there.
>
> > (This is opposed to BNC connectors where you thread in a plug to capture
> > the outer conductor between the outer shell and a rubber insert.  It also
> > works well, but it is bulky and the connectors cost more.  And you're
> > still asked to solder the center pin on, with all of the accompanying
> > center insulator distortion issues).
>
> > --
> > Tim Wescott
> > Control systems and communications consultinghttp://www.wescottdesign.com

> 
> > Need to learn how to apply control theory in your embedded system?
> > "Applied Control Theory for Embedded Systems" by Tim Wescott
> > Elsevier/Newnes,http://www.wescottdesign.com/actfes/actfes.html-Hide quoted text -
> 
> > - Show quoted text -
> 
> Tim, I solder these on the N connectors all the time with no problems.
> I have an old Weller soldering gun with the tip removed. I wedge the
> pin between the two electodes on the gun, slide the pin over the
> tinned center conductor and pull the trigger for a couple of seconds.
> The pin cools almost instantly preventing deformation of the
> insulation. Ive been doing this for over 20 years using the same gun.
> This may take a little practice not to melt the insulation. I
> remember  that it wasnt to bad getting the hang of it.
> 
> Jimmie

Hey OM
What size gun did you has a 240watt? How did you get the electrodes so
close together? Isn't the center pin of an N connector really small?
Or maybe you making lots 7/8 inch of heliax cables huh? Where the
center conductor is like 3/8 in copper tubing. Where the 3/8 inch
copper tubing would conduct all the heat away from the insulation?

73 OM
n8zu

## 2112. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 17:30:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <fjlqj4pgg2m4d4ac65vsqtcmdps3i5iutd@4ax.com>
Source record: 3699
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 8 Dec 2008 08:24:55 -0800, SparkyGuy <sparkyguy@mumcrank.ck>
wrote:

>Q: how do I take into account the "pigtails" of the driven
>element? A nice square loop is nice, but I've got to connect it to the
>(relatively) big diode,

You don't need to include diode lead length in the quad antenna
calculations. The "loop" in the quad driven element is just an LC
tuned circuit. It's as bit less than one wavelength around the loop
and resonated to 2.4GHz by the tuning cap. The diode and other
components do add some capacitance, which will lower the frequency
somewhat, but the adjustment cap is substantially larger than these
capacitances. For example, the off capacitance of a Schottky diode is
about 0.5pf. You do need to keep lead length short as the added
inductance will act as an RF choke.

However, instead of the giant diode, I suggest something smaller and
better, such as a Schottky diode:
<http://www.adsemi.com/diodes/schottky_barrier_mixer_detector.shtml>
<http://www.macom.com/psc/jsp/ListParts.jsp?dataFile=mixing_detector_diodes.txt>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

## 2113. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 17:44:15 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C5629CEF006ED092B01AD9AF@news.sf.sbcglobal.net>
Source record: 3700
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> You don't need to include diode lead length in the quad antenna
> calculations.

Thanks, Jeff. Very much appreciated.

# 2114. Re: Passive grid linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 18:19:30 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <ab91cae7-f6e3-4852-ad44-2db2a3025edf@41g2000yqf.googlegroups.com>
Source record: 3701

On Nov 27, 1:45 pm, ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
> Anybody here ever build a passive grid linear amp?
> That's where you simply terminate the grid of a tetrode with a 50 ohm
> resistor and just drive it directly.  Svetlana recommended that
> configuration with their 4cx400, 4xc800 and 4cx1600 tubes, and it should
> work well with more commone surplus 4cx250's.
>
> I was thinking of using a 4:1 or 9:1 balum and increasing the grid
> resistor value to 200 or 450 ohms to reduce the amount of driving power
> required.  With the 4cx250 a peak grid drive of about 50 volts is
> required in class AB1.  With a 50 ohm termination the driving power
> would be 50 watts, with a 200 ohm  termination 12.5 watts, and with the
> 450 ohm termination 5.6 watts.  That's actually just the power sucked up
> in the resistor, but the tube requires less than 1 watt of drive itself
> in class AB1.  Some power might be lost in the balum, so maybe the
> actual driving power might increase by a watt or two.   Since I wanted
> this to be a final for a QRP rig the larger terminating resistance
> looked like a better way to go.  The only issue is how high can you go
> with the termination resistance and keep the tube stable without
> neutralization being required?

I was recently playing around with a 6DQ6 PA and it did not require
netralization with 2K ohms on the gridI didnt try anything higher than
that. Using broadband transformers will introduce some reactance that
may have to be tuned out. I suspect this may not become a problem
until you get up to 10M or so.

Jimmie

# 2115. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 19:17:10 UTC
From: dplatt@radagast.org
Message-ID: <me8016-mft.ln1@radagast.org>
Source record: 3708
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

In article <hnopj4h6727gdtsjet4qke6o1j6lu0gkqa@4ax.com>,

>The problem with this is what I call the "alligator" effect. An
>alligator is an animal with a big mouth and small ears. Running a 1
>watt access point will make the xmitter heard over a much wider area
>than it can hear the responses from the clients. Unless the other end
>of the link (i.e. client radios) are also running the same high power
>level, the range will be limited by the clients tx power. In other
>words, the system gain and power levels in both directions have to be
>evenly matched to avoid turning the high power access point into what
>I consider to be no better than a jamming transmitter.

A not-uncommon scenario, I think. I've seen APs which put out a
signal that has useful strength for blocks, and yet you have to be
within about 100 feet of them to establish contact with a typical
client system.

This same issue is significant in other bands, as well. My area's
ham-radio VHF/UHF repeater coordination group has a firm principle...
a coordinated repeater's transmit coverage and receive coverage should
be consistent. Having an ultra-high-powered transmitter simply causes
interference well outside the repeater's practical use range.

Having overly-sensitive receivers can also be a problem, albeit a
lesser one, as it means that the repeater can be "keyed up" by remote
stations too far away to hear the repeater properly. It's less of
a problem, though, as most repeaters use CTCSS tone squelch these days
and won't respond to signals intended for co-channel repeaters with a
different CTCSS tone. I don't think this is an issue for 802.11
access points at all.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

## 2116. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 19:32:57 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghjspb$6g0$1@news.albasani.net>
Source record: 3702
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:

>
> I beg to differ. Unless I missed something in my post-midnight scan
> of the specs, the wireless router's TX power is set and forget. If it
> receives an extremely strong signal level report in the 802.11
> management packet, the power remains the same. The ability to do
> power control is there (because each device reports its RX signal
> strength and SNR) but very few access points even try.
>

You are speaking of the specs on the USB card, I am speaking access
point ... and actually, I have never searched for power-throttling in
the USB card, I simply would not use it ... when the wife and I go out
and I search for APs, I want every possible mw in action, at a clients,
hotel, hospital, etc.

>> Having one side of transmission link error free is MUCH superior to have
>> both sides error prone!
>
> I beg to differ. You're creating un-necessary interference. Let's
> play with the numbers.
>

Let's not, I said what I meant, and meant what I said, one side error
free is better than two sides error prone.

> The commodity wireless router belches about +12dBm. Yours is
> allegedly +27dBm. Range doubles for every 6dB increase in TX power.
> Therefore, your TX range is:
> (27 - 12) / 6 = 7.5
> time more than would be with a commodity wireless router. In terms of
> coverage area, that's:
> 7.5^2 = 56.3
> times the area. Assuming a uniform density of WLAN users in your
> vicinity, you're trashing 56.3 times as many users or systems as
> necessary.
>

No problem. I don't live in a dorm, trailer park, high-rise or
apartment building ... the software will automatically adjust to find
the best chan and recheck this decision, from time-to-time. If others
don't have that capability, they may wish to upgrade ... like I have
strongly implied, already, "If your AP is crap, toss it out!" I can't
imagine anyone here who failed to read specs before purchasing, however ???

> You're also partly wrong about asymmetrical systems being superior.
> The transition between a fairly good BER or PER (packet error rate) is
> rather abrupt. What happens is that the AP simply slows down the data
> rate until the PER improves. Since the connection speed can be
> different in each direction, you'll get very good speed in one
> direction, and probably very slow speed in the other. In addition,
> things go insane above 54Mbits/sec connection speed. You might have
> enough signal to go faster than 54Mbits/sec in one direction, but if
> it's lacking in the other direction, the AP will simply revert to
> 802.11g and limit the speed in the stronger direction to 54Mbits/sec.
> That's not a problem as few systems can operate reliably at
> 54Mbits/sec beyond a few meters range and in the presence of
> interference.
>

The equip can do b/g/n (b&g for the usb card in question, multiple computers here) With a windows widget to monitor my ap/card connection (transfer rate, errors, signal strength, etc.), I see it rise and fall from time to time. Sometimes I have seen the connection renegotiate from n to g to b ... however, at this same time AirSnare has went nuts. Seems wardriving teens are to blame ... <grin> I was a teen once, so long ago, I fear I may forget ... :-(

But, I will tell you, if ever I notice a problem with the errors (just looked, 3 errors), I will remember your words.

> Meanwhile, you're operating an alligator, jamming 56 times as many
> users as necessary, and polluting the airwaves with your overpowered
> xmitter. It's like operating a kilowatt xmitter in the middle of the
> QRP frequencies. Your stuff gets through, but nobody else's. I
> suggest you do the math, repent your evil ways, offer sacrifice to the
> radio gods on the hibachi, slap yourself on the wrist several times
> for penitence, and stop playing with the dark side.
>

Although, I am sure one or two of my neighbors are savvy enough to set their routers into non-broadcast mode of the SSID, and have WPA and filter on mac addresses, I just don't see the traffic/jam you speak of. But, like I say, if I do, I shall remember your words.

>> However, although I have a pocketfull of various USB dongles, my
>> external USB wifi "card" is the highest output I could find which is
>> cost effective (@ 500mw.) External USB being powered off the USB buss
>> must stay 500ma (@ 5v) or below, total consumption. And, would more
>> than allow for a 1 watt USB dongle.
>
> You would do better with a directional antenna, so as to not both
> pickup and deliver interference from other systems. Antennas with
> gain also improve the system gain in both directions, thus preventing
> the creation of an alligator.
>

No, I would NOT. When I take my laptop and USB antenna analyzer out to
the antenna(s), I appreciate my omni. When I take my laptop and USB ODB
II out to the car (in another direction), I appreciate my omni. When
teens go by wardriving and trigger AirSnare warnings (and giving me
one-hell-of-a-kick!), I appreciate my omni. You hang around with the
old men here, beware the cynicism, it IS contagious!

>> Here is a USB card to match my router:
>> http://www.data-alliance.net/servlet/the-90/802.11g-USB-802.11b-802.11n/Detail
>>
>> Try one, you'll like it, "Mikey does!" <grin>
>
> Nope. Instead, I was instrumental in convincing at least one mesh
> wi-fi vendor to reduce their poletop TX power, as they were causing
> most of their own interference. Asymmetric systems suck.
>

Beware. Again you risk being controlled by the control freaks here.
Glad it works for you, attempt to enforce it for me, we have a battle
... you know, there is equip and hacks available to open up chans far in
excess of what is legal, I am sure some are savvy and use them ...
perhaps teenagers? <straight face> I have even heard of some flashing
their ap/cards with the foreign version of the software for them and
exceeding power/chans ... shame on them! :-|

>> Regards,
>> JS
>
> Bah-Humbug (T'is the season).
>

However, you provide good discussion, and have valid arguments, I am
sure--some will agree with and appreciate--perhaps even some which are
state-of-the-art!

Personally, I would NEVER suggest purchasing an AP/card with less than
350mw capability. And, only then if you get one-hell-of-a-buy.

Warm regards,
JS

# 2117. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 19:35:12 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghjstg$6g0$2@news.albasani.net>
Source record: 3703
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

John Smith wrote:

> ...
> Personally, I would NEVER suggest purchasing an AP/card with less than
> 350mw capability. And, only then if you get one-hell-of-a-buy.
>
> Warm regards,
> JS
>

Sorry to have been so verbal. I could have summed that up rather
quickly, nicely and sweetly, I choose not to ...

You see millions of cell phones; You see a LOT of problems?

Regards,
JS

## 2118. MC2831

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 19:38:58 UTC
From: kludge@panix.com
Message-ID: <ghjt4i$ihr$1@panix2.panix.com>
Source record: 3704
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Not really a boatanchor question, but I am looking for some of the old
Motorola MC2831 FM transmitter chips which were discontinued a decade or
so ago. I'd take one of the MC2833 chips which are similar (they have a second
dedicated transistor instead of a tone generator on-chip). I'd prefer
the DIP package but I'd even take an SMT that I could stick on an adaptor.

Anybody got a couple in their junk box?
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

# 2119. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 19:39:20 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghjt58$6no$1@news.albasani.net>
Source record: 3705
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

SparkyGuy wrote:
>> http://www.n6mrx.com/Antenna/Cubical-Quad1.htm
>
> Thanks for the link. The calculator works for me.
>
> One remaining Q: how do I take into account the "pigtails" of the driven
> element? A nice square loop is nice, but I've got to connect it to the
> (relatively) big diode, and this requires a bit more wire from the loop to
> the diode (on the + side of the loop) and to the meter connector (on the -
> side). Do I include these wire lengths in the loop size calculation? Or
> ignore them?
>
> Or does the 1000pF cap effectively terminate the loop (re. size)?
>
> Thanks.
>

You MUST take into consideration every single mm of the loops length!
Leads (apparently "pigtails") ARE the loop ...

But, nothing stops you from being creative. The guy whos'
construction(s) we are following did have about optimum parts to work
with--you will just have to be "creative" ... good-luck.

Warm regards,
JS

## 2120. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 19:40:37 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghjt7l$6no$2@news.albasani.net>
Source record: 3706
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:

> ...
> However, instead of the giant diode, I suggest something smaller and
> better, such as a Schottky diode:
> <http://www.adsemi.com/diodes/schottky_barrier_mixer_detector.shtml>
> <http://www.macom.com/psc/jsp/ListParts.jsp?dataFile=mixing_detector_diodes.txt>
>

SMC sounds good ...

Regards,
JS

## 2121. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 19:42:07 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghjtaf$6no$3@news.albasani.net>
Source record: 3707
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:

>
> You don't need to include diode lead length in the quad antenna
> calculations. The "loop" in the quad driven element is just an LC
> ...

Hmmm, perhaps I read him wrong, you ARE correct here ... that
clarification is appreciated.

Regards,
JS

# 2122. Re: MC2831

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 20:08:29 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <74KdnYJ0AKoi46DUnZ2dnUVZ_hydnZ2d@giganews.com>
Source record: 3709
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Scott Dorsey" <kludge@panix.com> wrote in message
news:ghjt4i$ihr$1@panix2.panix.com...
> Not really a boatanchor question, but I am looking for some of the old
> Motorola MC2831 FM transmitter chips which were discontinued a decade or
> so ago. I'd take one of the MC2833 chips which are similar (they have a
> second
> dedicated transistor instead of a tone generator on-chip). I'd prefer
> the DIP package but I'd even take an SMT that I could stick on an adaptor.
>
> Anybody got a couple in their junk box?
> --scott
> --
> "C'est un Nagra. C'est suisse, et tres, tres precis."

Consolidated Electronics online catalog says they have the MC2831 in stock
(http://www.ceitron.com/semi/semi.phtml?part=MC2831).

Hth,
--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the
address)

Life is like a roll of toilet paper; the closer it gets to the end, the faster
it goes.

## 2123. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 20:36:36 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <k40rj4puigbjmi3mcqj3mg6p8pjnj6hjbg@4ax.com>
Source record: 3710
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 08 Dec 2008 11:35:12 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>You see millions of cell phones; You see a LOT of problems?

Oh yes, I certainly do see problems. They're well hidden and
mitigated in various ways. For example, if the error rate climbs, the
adaptive tx power control cranks up the power on both the handset and
the cell site end. If it persists, you get disconnected. Rather than
have the user sound like they're talking while gargling ball bearings,
the cell site just pulls the plug. Incidentally, the tx power control
algorithm is rather messy as it has to handle different data types, at
different rates, all while doing its best not to drain the handset
battery. One the cell site end, it's no better as the power
consumption of a typical cell site is non-trivial.

Problems? Well:
<http://www.roughlydrafted.com/2008/08/28/the-inside-deets-on-iphone-202-and-dropped-calls
/>
Hmmm... power control algorithm again.

Todays typical cell phones run about 150mw max average power output
(according to the FCC ID data). Some are even less. None are
anywhere near the 600mw legal maximum. If they could, you would have
a dead battery within about an hour. (Do the math).

Back to wi-fi and your setup. Sure, you'll have fairly good
preformance with a high power setup. 14 times the usual power is
bound to do some good. However, I suspect your neighbors are not so
thrilled and will probably also be shopping for higher power hardware.
It will be like an arms race, where the biggest bomb allegedly wins.
Dealing with mutual interference is no fun, especially with only 3
available non-overlapping channels.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2124. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 21:00:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <uc1rj49tdhcnnhblc5gcf81sdgs1om6rl9@4ax.com>
Source record: 3711
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 8 Dec 2008 11:17:10 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>A not-uncommon scenario, I think. I've seen APs which put out a
>signal that has useful strength for blocks, and yet you have to be
>within about 100 feet of them to establish contact with a typical
>client system.

About a year ago, I was trying to find the source of a very strong
2.4GHz signal in the downtown Santa Cruz mall area. Wi-Fi
communications among the various coffee shops and hot spots was
ummm.... a challenge. I eventually traced it down to a tall
residential hotel and a 2.4GHz cordless digital phone running what I
guess was a 10 watt power amplifier. Instead of a cell phone, this
person decided to provide his own cordless phone service that covered
the entire downtown area. You could see it anywhere but as is
predictable, his useful range was limited by the handset power, which
was well less than 10 watts. I'm not going to go into detail on
exactly what happened, but it should be sufficient that he's now aware
of the problem he was causing and is off the air.

Be the first in your neighborhood to dominate the airwaves:
<http://www.ssbusa.com/kunamp1.html>
Cool... 50 watt linear on 2.4GHz. Now, we're cooking.

>This same issue is significant in other bands, as well. My area's
>ham-radio VHF/UHF repeater coordination group has a firm principle...
>a coordinated repeater's transmit coverage and receive coverage should
>be consistent. Having an ultra-high-powered transmitter simply causes
>interference well outside the repeater's practical use range.

Good plan but there are problems. Most hams these daze use walkie
talkies with perhaps 1 watt of TX RF. The typical repeater is running
perhaps 10 to 40 watts out (after the duplexer). The walkie can hear
the repeater almost anywhere, but when trying to talk, they drop in
and out all the time. The mobiles, which run more power, are usually
well matched to the repeater's tx power. I've suggested adaptive tx
power control (to preserve battery power) on our 2 meter repeater, but
nobody wants it.

>Having overly-sensitive receivers can also be a problem, albeit a
>lesser one, as it means that the repeater can be "keyed up" by remote
>stations too far away to hear the repeater properly. It's less of
>a problem, though, as most repeaters use CTCSS tone squelch these days
>and won't respond to signals intended for co-channel repeaters with a

>different CTCSS tone.

We had a co-channel user that was running carrier squelch. It took only about 7 years of constantly pounding on the trustees before they would install PL. They lied on their NARCC application claiming they had a functional PL system. The experience taught me a few things, one of which is that hams generally make lousy RF neighbors.

>I don't think this is an issue for 802.11
>access points at all.

No, it's not for most home systems. There's a similar coexistence problem with mesh networks and municipal networks. Neither of these scale very well. They work ok with a small number of repeaters, but rapidly foul up as the usage, traffic, and number of repeaters increases to the point of mutual interference. Details and a rant on request.

There's also a problem with wi-fi and omnidirectional antennas. These pickup and spew inference from all direction equally well. Same with reflections and multi-path. If the main area of operation can better be covered with a directional antenna, then it should be used. It may create hidden nodes, but those can be handled by enabling flow control.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2125. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 21:13:49 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ro2rj4ld7cokug911lal92fdh41sfdm1pb@4ax.com>
Source record: 3712
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 7 Dec 2008 15:52:21 -0800 (PST), JIMMIE
<JIMMIEDEE123@YAHOO.COM> wrote:

>Tim, I solder these on the N connectors all the time with no problems.

In past life, in a land far far away (Smog Angeles), I once worked for and later ran a comm shop. At the time, UG-21/U male N connectors were commonly available and in fashion. Our 460MHz repeater systems were full of them so I had plenty of experience in soldering, assembling, and repairing these connectors. I don't want to remember all the 25 mile joy rides up the fire road to Santiago and Mojeska Pk just to fix a problem caused by a flakey UG-21/U coax connector. Well, to be totally accurate, I had equal problems with soldered PL-259 connectors. I fought these problems for years because I assumed there was no better way.

Meanwhile, I was also involved in an avionics shop (on the business end). They were slowly switching from soldered to crimp type connectors. The owner insisted that is was worth the effort because the number of connector failures and rework had approached zero with the crimp type. I became a believer overnight.

Many years later, I designed a few marine radios for the USCG. The specs would tolerate either solder or crimp. So, I asked which they preferred. Crimp was the answer, because they never could teach the techs how to properly solder a connector, while the crimper always does it right. All our radios used crimp connectors, even on the inside.

Roll forward more years and we have 10Base2 and 10baseT ethernet. The former uses UG-21/u N connectors. The latter uses BNC. The nice yellow coax cable with the flakey connector was a constant source of headaches. The crimp type BNC's never failed (unless abused).

I'm not sure what to suggest. With skill UG-21/u can be made to work. With luck, they can even be kept working in the field. However, I'll take crimp type any day, especially after many year of experience dealing with both.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

## 2126. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 22:18:49 UTC
From: dplatt@radagast.org
Message-ID: <93j016-nsm.ln1@radagast.org>
Source record: 3713
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

In article <uc1rj49tdhcnnhblc5gcf81sdgs1om6rl9@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

>Good plan but there are problems. Most hams these daze use walkie
>talkies with perhaps 1 watt of TX RF. The typical repeater is running
>perhaps 10 to 40 watts out (after the duplexer). The walkie can hear
>the repeater almost anywhere, but when trying to talk, they drop in
>and out all the time. The mobiles, which run more power, are usually
>well matched to the repeater's tx power. I've suggested adaptive tx
>power control (to preserve battery power) on our 2 meter repeater, but
>nobody wants it.

Seems to me that would introduce another set of incompatibilities.
People out on the fringe area of the repeater's coverage would be able
to hear repeated signals from weak transmitters (e.g. HTs), but if the
repeater saw a strong input signal from a mobile (or an HT near the
site) and dropped its transmitter power, the repeater coverage area
would shrink abruptly and those users out around the edges could lose
coverage. This could re-create the "hidden node" problem in a new way!

I don't think adaptive power management can work reliably in the
absense of a signal-quality feedback from each station which is
accessing the repeater/AP.

>We had a co-channel user that was running carrier squelch. It took
>only about 7 years of constantly pounding on the trustees before they
>would install PL. They lied on their NARCC application claiming they
>had a functional PL system.

Grrr. <Worf> "Romulans have *no* sense of honor." </Worf>

Our system (W6ASH, SPECS, at El Camino Hospital in Mountain View)
switched over to PL-tone-only years ago, and it helps in numerous
ways... the absence of noise-initiated kerchunking is a real blessing.
I've preserved the ability to switch the repeaters over to
carrier-sense-only in an emergency but really don't expect to ever
need to use this feature.

> The experience taught me a few things,
>one of which is that hams generally make lousy RF neighbors.

Some are lousy neighbors, lazy and self-centered. Others hold
themselves and their equipment and operation to very high standards. I
think it depends very much on the individuals involved, on their
attitudes, and on their level of prior experience in supporting a
real-world user community.

>No, it's not for most home systems. There's a similar coexistence
>problem with mesh networks and municipal networks. Neither of these
>scale very well. They work ok with a small number of repeaters, but
>rapidly foul up as the usage, traffic, and number of repeaters
>increases to the point of mutual interference. Details and a rant on
>request.

I believe you!

My impression is that a limited set of mesh repeaters, and a plentiful
set of direct backhaul links on a different (non-interfering) band,
works out rather better.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

# 2127. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 23:26:32 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghkaf9$lab$1@news.albasani.net>
Source record: 3714
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:
> On Mon, 08 Dec 2008 11:35:12 -0800, John Smith
> <assemblywizard@gmail.com> wrote:
>
>> You see millions of cell phones; You see a LOT of problems?
>
> Oh yes, I certainly do see problems. They're well hidden and
> mitigated in various ways. For example, if the error rate climbs, the
> adaptive tx power control cranks up the power on both the handset and
> the cell site end. If it persists, you get disconnected. Rather than
> have the user sound like they're talking while gargling ball bearings,
> the cell site just pulls the plug. Incidentally, the tx power control
> algorithm is rather messy as it has to handle different data types, at
> different rates, all while doing its best not to drain the handset
> battery. One the cell site end, it's no better as the power
> consumption of a typical cell site is non-trivial.
>

Yes, hackers (well, you may prefer programmers/software-engineers?) do a
very nice job, they have done it with wifi too, still doing it actually,
personally--I suspect viagra! LOL

> Problems? Well:
> <http://www.roughlydrafted.com/2008/08/28/the-inside-deets-on-iphone-202-and-dropped-cal
ls/>
> Hmmm... power control algorithm again.
>
> Todays typical cell phones run about 150mw max average power output
> (according to the FCC ID data). Some are even less. None are
> anywhere near the 600mw legal maximum. If they could, you would have
> a dead battery within about an hour. (Do the math).
>

Yeah, personally, I could handle a cell phone 2x to 3x the size, most of
it battery ... my cellphone is 300mw out (max, but variable, as needed,
as you state), I read those specs before purchasing, also. 4 hours max
talk time (like if your sitting right under the tower?) is no problem
for me, mine averages 2-3hrs, but I have a pocket charger, takes two AA
high output recharge-ables (you can chuck alkaline in if needed) and is
quick, chat while charging, so never without power (did I mention 2 week
standby time?), now ask the wife, you get another answer ...

> Back to wi-fi and your setup. Sure, you'll have fairly good
> preformance with a high power setup. 14 times the usual power is

> bound to do some good. However, I suspect your neighbors are not so
> thrilled and will probably also be shopping for higher power hardware.
> It will be like an arms race, where the biggest bomb allegedly wins.
> Dealing with mutual interference is no fun, especially with only 3
> available non-overlapping channels.
>

My son and I, once or twice a year, attend a game fest. There is more high power equip set up than you can shake a whatever at ... doom, heretic, diablo, etc. (you can tell, I like the old ones :-( ) nets all off separate APs, the wifi cards are simply uncountable--if you think thats nuts, attend a gaming convention in Nevada, frankly, I would have to state, from REAL hands-on, the problems you state just don't exist to a REAL degree ... if they/it did, they would be fixing that now (more chans, tighter packet packing/encryption, more-adaptable, spread spectrum, etc. Remember, networking has NOT EVEN reached its' infancy, yet!) Without a doubt, there are conflicts and lost packets--you just never notice them--now, if everyone there started, separately, watching a HD movie, most-likely no joy ... :-(

Besides, my neighbors are idiots (technical idiots, I admit, I like a couple of 'em), I doubt they do anything but email/surf and download an illegal movie/song now-and-then -- well, I suspect them of porn--but I am like that yanno? Suspicious.

But hey, if everyone agreed with me, I would NOT be here, and this would NOT be fun--did I mention it would be boring? <wink>

Warm regards,
JS

# 2128. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 23:31:50 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghkap8$lni$1@news.albasani.net>
Source record: 3715
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Dave Platt wrote:
> In article <hnopj4h6727gdtsjet4qke6o1j6lu0gkqa@4ax.com>,
>
>> The problem with this is what I call the "alligator" effect. An
>> alligator is an animal with a big mouth and small ears. Running a 1
>> watt access point will make the xmitter heard over a much wider area
>> than it can hear the responses from the clients. Unless the other end
>> of the link (i.e. client radios) are also running the same high power
>> level, the range will be limited by the clients tx power. In other
>> words, the system gain and power levels in both directions have to be
>> evenly matched to avoid turning the high power access point into what
>> I consider to be no better than a jamming transmitter.
>
> A not-uncommon scenario, I think. I've seen APs which put out a
> signal that has useful strength for blocks, and yet you have to be
> within about 100 feet of them to establish contact with a typical
> client system.
>
> This same issue is significant in other bands, as well. My area's
> ham-radio VHF/UHF repeater coordination group has a firm principle...
> a coordinated repeater's transmit coverage and receive coverage should
> be consistent. Having an ultra-high-powered transmitter simply causes
> interference well outside the repeater's practical use range.
>
> Having overly-sensitive receivers can also be a problem, albeit a
> lesser one, as it means that the repeater can be "keyed up" by remote
> stations too far away to hear the repeater properly. It's less of
> a problem, though, as most repeaters use CTCSS tone squelch these days
> and won't respond to signals intended for co-channel repeaters with a
> different CTCSS tone. I don't think this is an issue for 802.11
> access points at all.
>

All the problems you state would disappear with the correct algorithms
controlling the packets/encryption/compaction ... there is just not
enough interest to put together a team together to do it, and a
for-profit organization would go broke doing it ... and, you can't get
everyone to agree. The (A)ncient (R)etarded (R)adio (L)aggards) don't
see a need--you see, no brass is required ... :-(

Regards,
JS

## 2129. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-08 23:53:43 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <a3brj4pn0p63trndql052isbclfp6k2s52@4ax.com>
Source record: 3716
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 8 Dec 2008 14:18:49 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>In article <uc1rj49tdhcnnhblc5gcf81sdgs1om6rl9@4ax.com>,
>Jeff Liebermann <jeffl@cruzio.com> wrote:
>
>>Good plan but there are problems. Most hams these daze use walkie
>>talkies with perhaps 1 watt of TX RF. The typical repeater is running
>>perhaps 10 to 40 watts out (after the duplexer). The walkie can hear
>>the repeater almost anywhere, but when trying to talk, they drop in
>>and out all the time. The mobiles, which run more power, are usually
>>well matched to the repeater's tx power. I've suggested adaptive tx
>>power control (to preserve battery power) on our 2 meter repeater, but
>>nobody wants it.
>
>Seems to me that would introduce another set of incompatibilities.
>People out on the fringe area of the repeater's coverage would be able
>to hear repeated signals from weak transmitters (e.g. HTs), but if the
>repeater saw a strong input signal from a mobile (or an HT near the
>site) and dropped its transmitter power, the repeater coverage area
>would shrink abruptly and those users out around the edges could lose
>coverage. This could re-create the "hidden node" problem in a new way!

Good point, but that's not what I had in mind. I was aware of the
problem and suggested that the power control be run by a micro. The
algorithm needs to be worked out, but basically, the weakest signal
sets the power level. The range of power adjustment also will not be
huge or large enough to have much of an effect on distant stations.
Our current 60 watt amplifier might have the power output reduced to
about 20 watts or 4.5dB power reduction. That's less than one S-unit
and probably wouldn't be noticeable even by distant stations. However,
it will make a huge difference in power consumption and battery
operation run time. There are a few other economies that can be
thrown in, such as having the repeater always ID in low power. Of
course, there are complications, such as the mobiles and handhelds not
reporting their RX signal quality, which makes deciding the repeater
power output somewhat problematic when dealing with the traditional
broken radios. (Same people, same radios, same problems, same club
net, every time). Incidentally, this was suppose to be a minor
feature of a proposed repeater voting system, which is another can of
worms.

>I don't think adaptive power management can work reliably in the
>absense of a signal-quality feedback from each station which is

>accessing the repeater/AP.

Yes it can. I intentionally reduced the repeater TX power during a club net from 60 watts (before the duplexer) to about 20 watts. Nobody said anything, there were no complaints, and nobody noticed, even after I mentioned it after the close of the net. As long as I don't run the power output to near zero, it can me made to work, even if the power level is set manually with a touch tone command.

>>We had a co-channel user that was running carrier squelch. It took
>>only about 7 years of constantly pounding on the trustees before they
>>would install PL. They lied on their NARCC application claiming they
>>had a functional PL system.
>
>Grrr. <Worf> "Romulans have *no* sense of honor." </Worf>

Actually, it was far more stupid than it appears. We had several of the club politicians pounding on the alleged trustee of the repeater, who literally didn't care, didn't communicate with the rest of the organization, broke numerous promises to take it up with the board, and so on. Complaints to NARCC went to the trustee with predictable results. We were simply talking to the wrong person. One day, we caught the right person on the air working on the repeater. He was informed of the situation, after a few emails and the usual miscommunications, the PL decoder magically appeared. As would be expected, the initial transistion was slow. First there was no-PL during their club nets. Later, it became full time. There was also some work done on placing a notch in the antenna pattern in the direction of Santa Cruz. That has worked quite nicely.

>Our system (W6ASH, SPECS, at El Camino Hospital in Mountain View)
>switched over to PL-tone-only years ago, and it helps in numerous
>ways... the absence of noise-initiated kerchunking is a real blessing.
>I've preserved the ability to switch the repeaters over to
>carrier-sense-only in an emergency but really don't expect to ever
>need to use this feature.

That alleged benefit is that no PL allows visitors and hams with antique hardware to use the repeater. We have a control code that is available to anyone that will temporarily disable the PL for a specified time period. It actually does get used by some hams who apparently plan on being buried with their ancient radios and have no intention of ever selling them.

>> The experience taught me a few things,
>>one of which is that hams generally make lousy RF neighbors.
>
>Some are lousy neighbors, lazy and self-centered. Others hold
>themselves and their equipment and operation to very high standards. I
>think it depends very much on the individuals involved, on their
>attitudes, and on their level of prior experience in supporting a
>real-world user community.

It varies. I consider myself a good example of one of the lousy RF neighbors, so I know they exist.

>My impression is that a limited set of mesh repeaters, and a plentiful
>set of direct backhaul links on a different (non-interfering) band,
>works out rather better.

Sure, but that's not the way most municipal wireless networks are umm.... engineered. Most are single channel, store and forward repeaters. The problem is that if you're perhaps 3 nodes away from where it hits the wired internet, you will have 4 identical duplicated packets flying through the air. If everyone can see everyone else (as is the case with omni antennas on office rooftops), only one of those radios can be transmitting at a time. That means that you would be hogging at least 3 times the shared bandwidth (airtime is shared) to deliver one lousy packet. Add the problem of trying to create the ultimate geographic routing algorithm, and mesh networks have a propensity to fill the airtime with duplicates, retransmissions, and junk. The worst of the worst are broadcasts, noteably ARP requests, which go everywhere. I was monitoring what was coming out of Google's Mtn View network and finding about 60% of the airtime occupied by ARP requests. Of course, when the proponents of municipal wireless find that there are holes in their coverage, they just add yet another store and forward mesh repeater. Eventually, the density is high enough for the mesh repeaters to start interfering with each other. Since this is difficult to diagnose, the usual solution is to increase the TX power of the mesh node. That does the opposite of what might be expected, but until the numbers are in for availability testing, everyone just assumes that more power is more better. It took quite a bit of arguing to convince one mesh operator to reduce their power and even more to demonstrate that it worked. As an example, see the data and conclusions from the old MIT RoofNet at:
<http://pdos.csail.mit.edu/roofnet/doku.php?id=interesting>
Note the probabilies of actually delivering a packet through just one hop. Yech.

I couldn't resist and just had to rant. But, it was worth it.

Onward to another thrilling day of doing battle with QuickBooks and my traditional end of the year billing nightmare...

--
# Jeff Liebermann 150 Felker St #D Santa Cruz CA 95060
# 831-336-2558 jeffl@comix.santa-cruz.ca.us
# http://802.11junk.com jeffl@cruzio.com
# http://www.LearnByDestroying.com AE6KS

## 2130. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 01:13:48 UTC
From: Jim Lux <james.p.lux@jpl.nasa.gov>
Message-ID: <ghkgob$k0s$1@news.jpl.nasa.gov>
Source record: 3717
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:
>
> Good point, but that's not what I had in mind. I was aware of the
> problem and suggested that the power control be run by a micro. The
> algorithm needs to be worked out, but basically, the weakest signal
> sets the power level. The range of power adjustment also will not be
> huge or large enough to have much of an effect on distant stations.
> Our current 60 watt amplifier might have the power output reduced to
> about 20 watts or 4.5dB power reduction. That's less than one S-unit
> and probably wouldn't be noticeable even by distant stations. However,
> it will make a huge difference in power consumption and battery
> operation run time.

Would it? A lot of amplifiers don't change their power consumption all
that much, especially if they're designed for saturated operation (i.e.
if you reduce the input drive, they either distort, or drop into linear
mode and dissipation goes up).

if you have an amplifier designed for variable power output, then what
you say might be a good idea.

## 2131. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 04:12:47 UTC
From: Bryan <bryan.swadenerNOSPAM@comcast.net>
Message-ID: <r-adnbrpUp6hbaDUnZ2dnUVZ_gadnZ2d@giganews.com>
Source record: 3718
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

raypsi wrote:
> Hey OM
> What size gun did you has a 240watt?
[snip]
> 73 OM
> n8zu

Weller manufactures the following of that type of solder guns:

8200 = 140/100W
D550 = 260/200W
D650 = 300/200W

See http://www.cooperhandtools.com/brands/weller/index.cfm

I have an 8200. They make plain copper and iron-clad copper tips (the iron-clad tips last longer). The beauty is that, when your only tip goes open and the local hardware store is closed and you HAVE TO solder something, 12ga solid copper wire can be formed into a tip. :)

vy 73,
Bryan WA7PRC

## 2132. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 05:02:18 UTC
From: Ed Cregger <ecregger@bellsouff.net>
Message-ID: <WXm%k.5708$mw2.3205@bignews4.bellsouth.net>
Source record: 3719
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I still have a dual power (500/250) model Weller gun that a friend bought while we were in the Air Force. He took it out of the package and dropped it on the floor accidentially. A tiny piece of non functional plastic busted off the top, so he threw it in the trash can (he was having a bad day). I pulled it out of the trash, plugged it in and showed him that it still worked fine. I then offered it back to him. He wanted no parts of it. I'm still using it to this day. That 500 watt heating range actually comes in handy now and then.

Ed Cregger

"Bryan" <bryan.swadenerNOSPAM@comcast.net> wrote in message
news:r-adnbrpUp6hbaDUnZ2dnUVZ_gadnZ2d@giganews.com...
> raypsi wrote:
>> Hey OM
>> What size gun did you has a 240watt?
> [snip]
>> 73 OM
>> n8zu
>
> Weller manufactures the following of that type of solder guns:
>
> 8200 = 140/100W
> D550 = 260/200W
> D650 = 300/200W
>
> See http://www.cooperhandtools.com/brands/weller/index.cfm
>
> I have an 8200. They make plain copper and iron-clad copper tips (the
> iron-clad tips last longer). The beauty is that, when your only tip goes
> open and the local hardware store is closed and you HAVE TO solder
> something, 12ga solid copper wire can be formed into a tip. :)
>
> vy 73,
> Bryan WA7PRC
>

# 2133. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 06:53:12 UTC
From: "Dr. Barry L. Ornitz" <NoSPAM@unknown.org>
Message-ID: <%Io%k.2336$R43.4@newsfe08.iad>
Source record: 3721

"raypsi" <RBorowiak@gmail.com> wrote in message
news:4cd6853b-e2a0-4efc-a938-a481af030f3c@v15g2000yqn.googlegroups.com...
On Dec 4, 9:26 pm, "NoSPAM" <unkn...@nospam.org> wrote:
> "Stev eH"
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxd...@tfif.co.uk>
> wrote in messagenews:gh9kfq$ueh$1@news.albasani.net...
>
> > My first amp had 3 PL519s with a lethal power supply using a voltage
> > tripp{l}er direct off the 240V mains, heaters were direct off mains via a
> > 1n5406 diode. It's still up in the parents loft somewhere, must dig it
> > out over the holidays and give it a try....
>
> > Steve H
>
> Do you realize that the RMS value of half-wave rectified AC is not one half
> of the applied RMS voltage but rather 0.707 of the applied RMS voltage. So
> your three 40 volt filament PL519s actually saw about 56 volts RMS across
> each filament.

Hey OM
I beg to differ. As any casual observer can see that peek is 330V and
the average would be 0.363 of the peak so that's 40 volts in my
calculator all day long, for a 3 tube string.

Lets take a square wave, the average would be 0.5 of peek, far lower
than 0.707 you are used to using. Even if it was full wave 120 cycle
dc, the average would only be 0.636 still lower than 0.707.

I tell you what. Take a diode and rectify the mains with it and
measure the DC voltage with a DVM, VTVM or a VOM and 0.363 of peak is
what you will get for a DC voltage on that meter. Or do the real
integral of the dv/dt and see for yourself.

The TV repair business I was in manufacturers put 50volt peak on a CRT
6.3volt filament, the average voltage was 6.3 volts. Lets see you RMS
that one.

73 OM

n8zu
Ray,

You obviously do not understand the meaning of RMS as you are confusing the average voltage with the RMS voltage. In a resistive circuit, the RMS voltage of any waveform will produce

identical _heating_ as a DC voltage of the same value. This is an important point which is often overlooked, and it is why measuring the RMS value of a waveform is difficult. Let's start with some numbers but avoiding the use of integration...

Assume we have an AC voltage described by:

Vac = 339.41 sin[(2*Pi*f)t] where (2*Pi*f) is 376.99 for 60 Hz or 314.159 for 50 Hz power
Vac = 339.41 sin(376.99*t)

Since this is a symmetrical waveform, the _average_ value is 0 while the _peak_ positive voltage is 339.41 volts.

Now let us apply this voltage to a 1000 ohm resistor. Using Ohm's
Law, we can calculate the current, I=V/R.

Iac = 339.41 sin(376.99*t) volts/1000 ohms
Iac = 0.33941 sin(376.99*t) amps

Again this a symmetrical waveform with an average of 0, and a peak positive current of 0.33941 amps.

The instantaneous power dissipated by this resistor can be calculated by multiplying the voltage by the current.

Pac = 339.41 sin(376.99*t) * 0.33941 sin(376.99*t) watts
Pac = 115.20 [sin(376.99*t) * sin(376.99*t)] watts

Using a trigonometric identity
(http://en.wikipedia.org/wiki/List_of_trigonometric_identities) this can be rearranged to:

Pac = 115.20 * [1 - cos(2*376.99*t)]/2 watts

It is important to understand this function. The value of this function goes from zero to a peak of 115.20 watts at twice the frequency of the original waveform. The average value is no longer zero but is now 57.6 watts.

Now let us go back to using RMS values. Since the waveform is sinusoidal, we can use some common formulas.

Vrms = 0.707107 * Vpeak = 0.707107 * 339.41 = 240 volts
Irms = 240/1000 = 0.240 amps
Prms = 240 * 0.24 = 57.6 watts

This is exactly the same as the average of the power calculated above. If we had applied 240 volts DC to the 1000 ohm resistor, the power would again be 57.6 watts.

Now let us half-wave rectify the original AC waveform. The peak voltage will be the same as before, 339.41 volts. But the waveform is no longer symmetrical about zero. The average value is:

Vavg = Vpeak/Pi = 339.41/3.14159 = 108.038 volts

The RMS value is:

Vrms = Vpeak/2 = 169.706 volts

Applying this to the same 1000 ohm resistor gives a current of

Irms = Vrms/1000 = 0.169706 amps

The RMS power dissipated by the resistor is

Prms = Vrms * Irms = 28.8 watts

Note that this exactly _twice_ the power if the waveform had not been rectified.
Now let us do the same calculations for a symmetrical square wave.

Vpeak = 339.41 volts

Vavg = 0 volts

Vrms = 339.41 volts

Ipeak = 0.33941 amps

Iavg = 0 amps

Irms = 0.33941 amps

Prms = 115.2 watts

If the square wave is half wave rectified,

Vpeak = 339.41 volts

Vavg = 169.71 volts

Vrms = 169.71 volts

Ipeak = 0.33941 amps

Iavg = 0.16971 amps

Irms = 0.16971 amps

Prms = 28.80 watts

Note that this is exactly the same as with the sinusoidal waveform. This is exactly the point, half wave rectification produces _one_half_of_the_power_ that would be produced by the original sinusoidal AC waveform. It does not produce half of the original peak voltage. It produces SQRT(2)/2 times the original RMS voltage.

As for your numbers, Ray, you need a refresher course in mathematics. As for DVM, VTVM, or VOM readings, you will have to specify the filtering of the waveform before I can tell you the value. In the case of the CRT filament
(and I really think you might mean the HV rectifier filament) power is supplied by a waveform having a high peak value but an RMS value that is low. Again you would need to specify the waveform exactly.

There is a very simple way to prove that my calculations are right. Get two incandescent light bulbs of the same type and wattage. Wire a diode of adequate voltage and current rating in series with one bulb and connect to the wall outlet. Use a variac to feed the second bulb. With the bulbs side by side, adjust the variac until both bulbs are the same brightness. Measure the variac output voltage. You will find that it is not 50% of the line voltage but instead very close to 70.7% of the line voltage.

In fact, the most accurate RMS voltmeters operate in a similar fashion. They let the unknown voltage heat a resistor. Then they use an adjustable DC voltage to heat an identical resistor. When both resistors are at the same temperature, the DC voltage is the RMS value of the unknown voltage. Consult the Linear Technology LT1088 datasheet for a description of one method of doing this.
http://www.datasheetcatalog.org/datasheet/lineartechnology/lt1088.pdf

The same company also offers several other RMS-to-DC converters that operate on a delta-sigma computation technique.
http://www.linear.com/pc/downloadDocument.do?navId=H0,C1,C1154,C1086,D4486

A general discussion of RMS measurements may be found at:
http://www.edn.com/contents/images/46857.pdf.

This last reference shows typical errors for different types of RMS measuring meters. I strongly suggest to anyone still confused to read it. And I really hope Phil tries the experiment I suggested.

73, Barry L. Ornitz, PhD WA4VZQ

# 2134. Re: 6L6 substitute [RMS discussion]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 07:01:13 UTC
From: "Dr. Barry L. Ornitz" <NoSPAM@unknown.org>
Message-ID: <%Io%k.2337$R43.936@newsfe08.iad>
Source record: 3720

"raypsi" <RBorowiak@gmail.com> wrote in message
news:4cd6853b-e2a0-4efc-a938-a481af030f3c@v15g2000yqn.googlegroups.com...
On Dec 4, 9:26 pm, "NoSPAM" <unkn...@nospam.org> wrote:
> "Stev eH"
> <StevehkhhSDJvhvbjjxbvvbhnvbhzjdnxzvzhzdshbvnjzvnbvnvjbvbcjbvvvvnmxvzjhjzsdgfgsfghgjsghgsljhglhdjfghfufgfhzysgfhczgugfvzlvufzvllgfzlyfyvlgbylvdfghvblyrylxybvryvbfbllyxd...@tfif.co.uk>
> wrote in messagenews:gh9kfq$ueh$1@news.albasani.net...
>
> > My first amp had 3 PL519s with a lethal power supply using a voltage
> > tripp{l}er direct off the 240V mains, heaters were direct off mains via a
> > 1n5406 diode. It's still up in the parents loft somewhere, must dig it
> > out over the holidays and give it a try....
>
> > Steve H
>
> Do you realize that the RMS value of half-wave rectified AC is not one half
> of the applied RMS voltage but rather 0.707 of the applied RMS voltage. So
> your three 40 volt filament PL519s actually saw about 56 volts RMS across
> each filament.

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than 0.707 you are used to using. Even if it was full wave 120 cycle
dc, the average would only be 0.636 still lower than 0.707.

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measure the DC voltage with a DVM, VTVM or a VOM and 0.363 of peak is
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Ipeak = 0.33941 amps

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Prms = 115.2 watts

If the square wave is half wave rectified,

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Ipeak = 0.33941 amps

Iavg = 0.16971 amps

Irms = 0.16971 amps

Prms = 28.80 watts

Note that this is exactly the same as with the sinusoidal waveform. This is exactly the point, half wave rectification produces _one_half_of_the_power_ that would be produced by the original sinusoidal AC waveform. It does not produce half of the original peak voltage. It produces SQRT(2)/2 times the original RMS voltage.

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(and I really think you might mean the HV rectifier filament) power is supplied by a waveform having a high peak value but an RMS value that is low. Again you would need to specify the waveform exactly.

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datasheet for a description of one method of doing this.
http://www.datasheetcatalog.org/datasheet/lineartechnology/lt1088.pdf

The same company also offers several other RMS-to-DC converters that operate on a delta-sigma computation technique.

http://www.linear.com/pc/downloadDocument.do?navId=H0,C1,C1154,C1086,D4486

A general discussion of RMS measurements may be found at:

http://www.edn.com/contents/images/46857.pdf.

This last reference shows typical errors for different types of RMS measuring meters. I strongly suggest to anyone still confused to read it. And I really hope Phil tries the experiment I suggested.

73, Barry L. Ornitz, PhD WA4VZQ

## 2135. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 08:49:40 UTC
From: d_musicant@yahoo.com
Message-ID: <20081209034833.746$Xg@newsreader.com>
Source record: 3722
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

DaveC <me@bogusdomain.net> wrote:
> Looking for outdoor omni "whip" antenna for 2.4 GHz.
>
> Is there any reason to not go for the greatest gain antenna, given that
> cost is not too important (within reason)?
>
> There are scads of these on the 'net. I'm looking for someone who has
> experience with one or more of them and can make a recommendation for
> one.
>
> Thanks,

This antenna works great wit my laptop and desktop:

D-Link ANT24-0700 Antenna, 7db gain
http://dealnews.com/D-Link-7-d-Bi-Omni-Directional-Indoor-Wireless-Antenna-for-15-after-rebate-free-shipping/262642.html

--
-

## 2136. Re: WiFi antenna recommendations?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 08:54:51 UTC
From: d_musicant@yahoo.com
Message-ID: <20081209035344.902$Lu@newsreader.com>
Source record: 3723
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.internet.wireless

"Bill Kearney" <wkearney99@hotmail.com> wrote:
> > OK, time to clarify...
>
> You still don't describe what sort of connection you're trying to make.

I have this Comet antenna mounted on my roof and it works super!

http://www.wlanparts.com/product/GP-24/GP24_24GHz_15dbi_Omni_from_Comet.htm
l

--
-

## 2137. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 09:38:35 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <d1d682f3-4cb8-4158-8a69-07d9a2c14e11@a12g2000yqm.googlegroups.com>
Source record: 3724
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Dec 8, 11:12 pm, "Bryan" <bryan.swadenerNOS...@comcast.net> wrote:
> raypsi wrote:
> > Hey OM
> > What size gun did you has a 240watt?
> [snip]
> > 73 OM
> > n8zu
>
> Weller manufactures the following of that type of solder guns:
>
> 8200 = 140/100W
> D550 = 260/200W
> D650 = 300/200W
>
> Seehttp://www.cooperhandtools.com/brands/weller/index.cfm
>
> I have an 8200.  They make plain copper and iron-clad copper tips (the

Hey OM

But can you wedge a center pin from an N connector in between the
electrodes of your 140watt gun (without a tip in the gun) and solder
in the center conductor of a piece of coax? hmmm?

73 OM

n8zu

## 2138. our real femme

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 15:37:11 UTC
From: elvinabr@gmail.com
Message-ID: <42837a00-2f00-4c66-a754-8150029c8cb3@s9g2000prg.googlegroups.com>
Source record: 3725
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Some of our real femme http://wesexy.byethost8.com/

## 2139. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 15:52:00 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <5292332f-af39-4560-91b4-a556ba28779e@l39g2000yqn.googlegroups.com>
Source record: 3726
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Dec 8, 4:13 pm, Jeff Liebermann <je...@cruzio.com> wrote:
> On Sun, 7 Dec 2008 15:52:21 -0800 (PST), JIMMIE
>
> <JIMMIEDEE...@YAHOO.COM> wrote:
> >Tim, I solder these on the N connectors all the time with no problems.
>
> In past life, in a land far far away (Smog Angeles), I once worked for
> and later ran a comm shop.  At the time, UG-21/U male N connectors
> were commonly available and in fashion.  Our 460MHz repeater systems
> were full of them so I had plenty of experience in soldering,
> assembling, and repairing these connectors.  I don't want to remember
> all the 25 mile joy rides up the fire road to Santiago and Mojeska Pk
> just to fix a problem caused by a flakey UG-21/U coax connector. Well,
> to be totally accurate, I had equal problems with soldered PL-259
> connectors.  I fought these problems for years because I assumed there
> was no better way.
>
> Meanwhile, I was also involved in an avionics shop (on the business
> end).  They were slowly switching from soldered to crimp type
> connectors.  The owner insisted that is was worth the effort because
> the number of connector failures and rework had approached zero with
> the crimp type.  I became a believer overnight.
>
> Many years later, I designed a few marine radios for the USCG.  The
> specs would tolerate either solder or crimp.  So, I asked which they
> preferred.  Crimp was the answer, because they never could teach the
> techs how to properly solder a connector, while the crimper always
> does it right.  All our radios used crimp connectors, even on the
> inside.
>
> Roll forward more years and we have 10Base2 and 10baseT ethernet.  The
> former uses UG-21/u N connectors.  The latter uses BNC.  The nice
> yellow coax cable with the flakey connector was a constant source of
> headaches.  The crimp type BNC's never failed (unless abused).
>
> I'm not sure what to suggest.  With skill UG-21/u can be made to work.
> With luck, they can even be kept working in the field.  However, I'll
> take crimp type any day, especially after many year of experience
> dealing with both.
>
> --
> Jeff Liebermann     je...@cruzio.com
> 150 Felker St #D    http://www.LearnByDestroying.com

> Santa Cruz CA 95060http://802.11junk.com
> Skype: JeffLiebermann     AE6KS    831-336-2558

I dont have a problem with crimp on terminals just that where I work someone has always borrowed the crimp tool just when I need it. I always have my trusty soldeing gun handy, no one wants to borrow it. For me one is as easy and works as well as the other. The biggest problem I have with the non crimp type is the shield is eventually cut from the connector. The ones at work that are disconnected weekly for preventive maintenance have only lasted about 20 years before needing the connectors replaced, BUMMER. The crimp-on type are not without their problems. I was doing an inspection after some equipment installation and was able to pull the the ends off of 20 BNC connectors. The inspection stopped at that point and the decision was made to reaccomplish all of the connectors, about 200 of them. The installer was not happy. The problem turned out to be a bad crimp tool. Like the solder-ons if done properly they are both reliable connections.

Jimmie

## 2140. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 17:22:09 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5s8tj4p6njavr9eg05f4jhdq18f7qsnj3i@4ax.com>
Source record: 3727
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Tue, 9 Dec 2008 07:52:00 -0800 (PST), JIMMIE <jimmie68@gmail.com>
wrote:

>I dont have a problem with crimp on terminals just that where I work
>someone has always borrowed the crimp tool just when I need it.

I know the problem. Tools are expensive. However, there are a
variety of cheap replacements that seem to work well for me:
<http://802.11junk.com/jeffl/antennas/Misc/slides/crimpers.html>
I have several sets of these that cover everything from RG-188 to
LMR-400 size coax. There's also one for LMR-600 but it was being
borrowed when I took the photo. (Yes, it came back eventually). I
think I paid about $35/ea for the tools in the photo. At that price,
spares are an option.

>I
>always have my trusty soldeing gun handy, no one wants to borrow it.

When I was working on the bench, I had my soldering iron bolted to a
large block of wood to discourage the borrowers. My biggest problem
was someone trading or outright stealing my Weller solder tips. I
kept my supply locked up and hidden.

>For me one is as easy and works as well as the other.

I beg to differ. Many of my connector installs had to be done in the
field, usually at a mountain top repeater site or up on a tower. The
problem was that the wind would cool just about any soldering iron,
gun, or even a propane torch, sufficiently to cause problems. Same
with the USCG vessels, where the coax was snaked through the mast, and
the connector had to be crimped at the top in the field. The only
place where I would effectively solder a connector was inside a
building. I do recall one day on a tower, when I draped my jacket
over my head, and soldered some connector by flashlight, but I don't
recommend doing that.

>The biggest
>problem I have with the non crimp type is the shield is eventually
>cut from the connector.

Agreed. I have the problem with my test cables. A good strain relief
is a big help at immobilizing the shield. Pomona jumper cables have
molded plastic strain relief's. I use clear shrink tube (so I can see
when things are starting to come apart). In general, it's nut much of
a problem as I have far more UG-88/u BNC plugs fall apart than the
crimped variety.

>The ones at work that are disconnected weekly
>for preventive maintenance have only lasted about 20 years before
>needing the connectors replaced, BUMMER.

Weekly? 52 weeks per year times 20 years is over 1000 connector cycles. That's quite a few. I suspect the ears on the BNC jacks will also be worn. I'm not surprised that they're failing. I did some Googling and found specs for UG-88/u connectors ranging from 500-1000 mating cycles. Methinks you're at the upper limit of the lifetime.

>The crimp-on type are not
>without their problems. I was doing an inspection after some equipment
>installation and was able to pull the the ends off of 20 BNC
>connectors. The inspection stopped at that point and the decision was
>made to reaccomplish all of the connectors, about 200 of them. The
>installer was not happy. The problem turned out to be a bad crimp
>tool. Like the solder-ons if done properly they are both reliable
>connections.

Bummer. At one employer, we had an Amp-o-lectric crimping machine. Someone found that it was possible to mis-adjust the tool to produce defective crimps and proceeded to explore the possibilities. I was blessed with dozens of field failures and a recall because nobody had thought to run a pull test on the crimped connections. Everyone assumed the machine could do no wrong. However, that's the big advantage of a crimped connection... it's consistent. I can't get that kind of consistency from soldered connectors, especially those done in the field.

Incidentally, I've seen more damage done by the razor blade coax stripping tools, than by the crimping or soldering. One nick in a solid center conductor and the center pin connection falls apart inside the connector. I try to use a thermal wire stripper, but that also takes some skill.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

## 2141. Re: Antenna dimensions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 17:47:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <daatj4ldcqpfk2na5sp2m9jrjtoldbbcmv@4ax.com>
Source record: 3728
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 08 Dec 2008 17:13:48 -0800, Jim Lux <james.p.lux@jpl.nasa.gov>
wrote:

>Jeff Liebermann wrote:
>>
>> Good point, but that's not what I had in mind. I was aware of the
>> problem and suggested that the power control be run by a micro. The
>> algorithm needs to be worked out, but basically, the weakest signal
>> sets the power level. The range of power adjustment also will not be
>> huge or large enough to have much of an effect on distant stations.
>> Our current 60 watt amplifier might have the power output reduced to
>> about 20 watts or 4.5dB power reduction. That's less than one S-unit
>> and probably wouldn't be noticeable even by distant stations. However,
>> it will make a huge difference in power consumption and battery
>> operation run time.

>Would it? A lot of amplifiers don't change their power consumption all
>that much, especially if they're designed for saturated operation (i.e.
>if you reduce the input drive, they either distort, or drop into linear
>mode and dissipation goes up).

For FM repeater use, the amplifiers are usually Class C or overdriven
Class AB. The output devices are alternately driven into saturation
and cutoff. I have some measurements somewhere for our various
repeaters buried somewhere. As I vaguely recall, the overall system
efficiency was about 50% for VHF and about 35% for the UHF repeater.
Of course, everything is properly logged and documented:
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/slides/Documentation.html>

There are a variety of methods of reducing power, but for Class C, the
easiest is to reduce the collector or drain voltage on the RF output
stages. This works well down to about 20% of rated output power, but
often causes nasty oscillations and parasitics. It also burns quite a
bit of power in the linear voltage regulator. Not ideal, but I know
it works from experience designing marine VHF radios, which were
adjustable and stable from 10-25 watts RF out.

My guess(tm) is that the VHF rack burns about 10A in transmit at
13.6VDC. The UHF box burns about 15A in transmit. The idea is to
reduce this to the absolute minimum, and still have a usable machine.
Ideally, the power control should be automatic.

You're correct that the efficiency drops badly at lower power, but
reducing the overall current consumption is the goal here. The
efficiency may be lousy at low power, but if the overall current

consumption drops proportionately, it's good enough. The idea is to be able to run the repeater for several days, in an emergency, on battery power:
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/slides/Batteries.html>
I might setup a switching regulator to reduce the power dissipated in the voltage regulator circuit. I've never tried this but it seems easy enough. Power amp distortion is not an issue here as the FM repeater doesn't have any linear components in the RF signal.

The K6BJ repeater:
<http://www.k6bj.org>
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/index.html
<http://www.LearnByDestroying.com/k6bj/IRLP/index.html>

>if you have an amplifier designed for variable power output, then what
>you say might be a good idea.

Nope. None of the amps are designed to be operated that way. Few commerical FM transmitters and power amps are designed for adjustable power. Such details have never stopped me in the past. However, club politics, other priorities, and my health issues have slowed me down, thus nothing has been done.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

## 2142. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-09 23:39:11 UTC
From: ml <m@di.net>
Message-ID: <m-9B2EA7.18391109122008@news.optonline.net>
Source record: 3729
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

In article <0001HW.C561768E0029D229B01AD9AF@news.sf.sbcglobal.net>,
SparkyGuy <sparkyguy@mumcrank.ck> wrote:

> Halfway down this page (it's a PDF doc):
>
> <http://www.cablesandconnectors.com/PIX/CC-040.pdf>
>
> the TNC and BNC connectors are advertised as "dual-crimp". What does this
> mean? "Dual" as in center in crimp and outer shield ferrule crimp?
<<yes

>
> As opposed to what? Single-crimp? That would be connectors that use the
> center, solid conductor as the center pin
yes>>>(solder or captivated

and then crimp the shield ferrule?
> Or...? >>>yes
>
> Newly (did you guess?) into small coax connectors and trying to get the
> terminology straight...
<you did good

are you just trying to learn the terminology or do you really
need to make some connectors and seek the best/easiest? way to
do that??

if you did you got a bunch of good tips here from the others

>
> Thanks.

i'll throw in a few other simular options to connectors

there are strip tools that can cleanly and safely strip the coax
they just spin around and do a great job i've seen cost between 50
to 100bucks depending on coax

also you can get a fixed center pin whereby you don't have to
solder or crimp, the captivated connectors the outer
sheild part gets a crimp only typically a bit of glue on the
inside heavy ga heat shrink shrink goes over all

they are rated very good soare are the center pins /outer shield
that gets crimped using the right tool of course

no matter what you use skills at doing the job and
inspection/testing of the work will always remain a constant

## 2143. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-10 09:44:29 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C564CF7D00F2A984B01AD9AF@news.sf.sbcglobal.net>
Source record: 3730
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> One nick in a
> solid center conductor and the center pin connection falls apart
> inside the connector.

Can you say more about this? Or point to some web discussions / photos?

Thanks.

## 2144. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-10 09:45:05 UTC
From: Anon bozo <anon@bozo.to>
Message-ID: <0001HW.C564CFA100F2B1FDB01AD9AF@news.sf.sbcglobal.net>
Source record: 3731
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> no matter what you use skills at doing the job and
> inspection/testing of the work will always remain a constant

Your spacing makes for difficult parsing and comprehension.

## 2145. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-10 14:01:40 UTC
From: Dave <dave@dave.dave>
Message-ID: <493fcbc4$0$31202$bd467cd0@news.dslextreme.com>
Source record: 3732
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

SparkyGuy wrote:
>> One nick in a
>> solid center conductor and the center pin connection falls apart
>> inside the connector.
>
> Can you say more about this? Or point to some web discussions / photos?
>
> Thanks.
>

Any time you nick a solid copper wire it will be severely weakened and
will likely break.

## 2146. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-10 14:58:10 UTC
From: JB <nospam@goofball.net>
Message-ID: <6OQ%k.883$c35.89@nwrddc02.gnilink.net>
Source record: 3733
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> Any time you nick a solid copper wire it will be severely weakened and
> will likely break.

Dittos, can short internally too.

If it is anything important, the cable should be swept or at least checked for return loss at a higher frequency. Just in case the parts were mismatched out of the bag. Quality control can be a batch problem even in the high end stuff. Good help is hard to find.

# 2147. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-10 17:03:06 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <518774c6-0e14-436e-9f7b-55515992990a@g38g2000yqn.googlegroups.com>
Source record: 3734
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Dec 10, 9:58 am, "JB" <nos...@goofball.net> wrote:
> > Any time you nick a solid copper wire it will be severely weakened and
> > will likely break.
>
> Dittos, can short internally too.
>
> If it is anything important, the cable should be swept or at least checked
> for return loss at a higher frequency.  Just in case the parts were
> mismatched out of the bag.  Quality control can be a batch problem even in
> the high end stuff.  Good help is hard to find.

I learned to make cables while assisting installation of a Doppler VOR facility . We were sweeping the pre-made cables that came with the system and finding a lot of them bad. We cut open a few of the bad cables and founnd the center conductor was not in the center of the cable. All of a couple of hundred cables had to be remade and cut for proper phase. The other grunt worker Dust Craig and I became very proficient at putting N connectors on RG-214 and using a vector voltmeter.

Jimmie

## 2148. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-10 17:26:43 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <stsvj4phsvib8a4f2hr3jkbvnd965o5fun@4ax.com>
Source record: 3735
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Wed, 10 Dec 2008 01:44:29 -0800, SparkyGuy <sparkyguy@mumcrank.ck>
wrote:

>> One nick in a
>> solid center conductor and the center pin connection falls apart
>> inside the connector.

>Can you say more about this? Or point to some web discussions / photos?
>Thanks.

There's not much to say or show. The usual example is the common
RG-6/u cable TV coax, that uses the solid center wire as the center
pin of the F connector. By necessity, the center wire is rather
stiff. There's also no way to immobilize the center wire as there
would be no room for the mating jack. If the rotary razor blade wire
stripper or half asleep tech with the wire cutters manages to nick the
center wire, chances are good that moving the cable around will
eventually break the center wire at the nick.

Crimp type BNC plugs are also susceptible in the same area. The
difference is that the center pin is either crimped or soldered. The
center pin is also supported by the Teflon insulator. However, if the
coax is moved constantly, as is common with test cables, any nicks in
the center wire will eventually turn into a break. This one is
particularly insidious because it occurs inside the connector, where
both ends of the break are supported in place, resulting in an
intermittent, rather than a clean break.

Big fat center wires are not immune. They just have a different
problem. When one of the heavy stranded center wires from RG-8/u
style coax breaks at a nick, it's usually perfectly positioned to
short to ground. In the common PL-259 UHF connector, the coax end of
the break is not supported, resulting in a difficult to find, and
impossible to see, intermittent.

In my limited experience, the tools that cause the most problems are
the ones with the built in razor blades:
<http://www.mytoolstore.com/ideal/ide08-07.html>
<http://www.mytoolstore.com/ideal/ide08-06.html#coax>
<http://www.mytoolstore.com/ideal/ide08-08.html>
<http://www.fab-corp.com/product.php?productid=1665&cat=281&page=1>
<http://www.hyperlinktech.com/item.aspx?id=879>
(Note the huge variation in pricing)

As long as the blades are sharp they work just fine. However, when the blades get dull, the user tends to bend the cable to assist in the cutting, which sometimes results in a nicked center wire. Cleaning up the stripping job with a pair of diagonal cutters also causes problems. Stripping is also difficult with Teflon insulated wire and non-wicking insulation (marine coax), where the dielectric materials are bonded to the conductors. The best way to strip these materials and to be sure not to nick the wires is with a thermal wire stripper. <http://www.teledyneinterconnect.com/products/wire_strippers/wirestrip.asp> I got lucky and ended up with pile of these from some aerospace surplus outlet. Very handy. Just take care not to breath the fumes.

However, if you're working with LMR-400, LMR-600, or larger, the blades of the thermal stripper cannot expand wide enough to fit the coax cable. Therefore, I suggest getting the correct Times Microwave EZ-Strip coax stripper for these cables:
<http://www.hyperlinktech.com/item.aspx?id=881>
<http://www.hyperlinktech.com/item.aspx?id=882>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

## 2149. Re: "Dual crimp" coax connectors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-10 18:39:03 UTC
From: JB <nospam@goofball.net>
Message-ID: <b1U%k.922$c35.84@nwrddc02.gnilink.net>
Source record: 3736
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

A lot of this would seem to be trade secrets.

# 2150. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 02:27:13 UTC
From: "thegrumpymule@gmail.com" <thegrumpymule@gmail.com>
Message-ID: <c951dda6-3205-4805-9c8b-c521a9837658@q30g2000vbn.googlegroups.com>
Source record: 3737

Howdy,

A 6L6 immersed in a can of peanut oil is an old timey final, smells
good too.

73,
Grumpy
(Who can't get news express to work withg AIOE anymore.)

ken scharf wrote:
> Fred McKenzie wrote:
> > In article
> > <9dcff61e-91dd-4b57-8572-908eb16f4117@t3g2000yqa.googlegroups.com>,
> > JIMMIE <jimmie68@gmail.com> wrote:
> >
> >> I am considering an 807 as a replacement
> >
> > Jimmie-
> >
> > Just how simple will this transmitter be? My first novice transmitter
> > was built from an ARRL publication back in the 50s. The specification
> > was for a single 6V6, used as a crystal oscillator with output coupled
> > to the antenna.
> >
> > I found I could get more power with a 6L6 plugged into the same socket.
> > Along the way to getting more power, I found that crystal current would
> > increase to the point where the crystal would fracture!
> >
> > If you use a 807 or 1625, I hope you will have a lower power oscillator
> > driving it. Something like a 6AG7 would make a nice crystal oscillator,
> > and should have sufficient output to drive an 807.
> >
> > 73,
> > Fred
> > K4DII
> The 6AG7 - 807 combo is a classic. E. F. Johnson sold a 50 Watt Novice
> transmitter in the '50's with this tube line up (also a 5R4GY rectifier
> IIRC). Other tubes that have been used as the oscillator/driver were
> the 6CL6, 12BY7, 6GK6, and 5763.

# 2151. Re: "Dual crimp" coax connectors? [Thermal Wire Strippers]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 04:37:19 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <3O00l.9828$vl1.2848@newsfe03.iad>
Source record: 3738
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:stsvj4phsvib8a4f2hr3jkbvnd965o5fun@4ax.com...

> As long as the blades are sharp they work just fine. However, when
> the blades get dull, the user tends to bend the cable to assist in the
> cutting, which sometimes results in a nicked center wire. Cleaning up
> the stripping job with a pair of diagonal cutters also causes
> problems. Stripping is also difficult with Teflon insulated wire and
> non-wicking insulation (marine coax), where the dielectric materials
> are bonded to the conductors. The best way to strip these materials
> and to be sure not to nick the wires is with a thermal wire stripper.
> <http://www.teledyneinterconnect.com/products/wire_strippers/wirestrip.asp>
> I got lucky and ended up with pile of these from some aerospace
> surplus outlet. Very handy. Just take care not to breath the fumes.

Before retirement, many of my instrument designs had to work in
high-temperature, corrosive environments, so I frequently used PTFE*
insulated wires. I purchased one of the Teledyne thermal strippers and was
VERY pleased with its operation. The next year I found one for sale at a
hamfest for $5. I snapped it up immediately for home use. If you work
with small gauge wires, and especially with PTFE insulated wires, I
strongly recommend these units.

73, Dr. Barry L. Ornitz WA4VZQ

* A later job with W. L. Gore & Associates thoroughly indoctrinated in me
that Teflon was a DuPont trademark!

## 2152. Re: "Dual crimp" coax connectors? [Thermal Wire Strippers]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 12:48:42 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <e23eaa7a-79d8-466a-8948-315ee367d122@r13g2000vbp.googlegroups.com>
Source record: 3739
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Dec 10, 11:37 pm, "NoSPAM" <unkn...@nospam.org> wrote:
> "Jeff Liebermann" <je...@cruzio.com> wrote in message
>
> news:stsvj4phsvib8a4f2hr3jkbvnd965o5fun@4ax.com...
>
> > As long as the blades are sharp they work just fine.  However, when
> > the blades get dull, the user tends to bend the cable to assist in the
> > cutting, which sometimes results in a nicked center wire.  Cleaning up
> > the stripping job with a pair of diagonal cutters also causes
> > problems.  Stripping is also difficult with Teflon insulated wire and
> > non-wicking insulation (marine coax), where the dielectric materials
> > are bonded to the conductors.  The best way to strip these materials
> > and to be sure not to nick the wires is with a thermal wire stripper.
> > <http://www.teledyneinterconnect.com/products/wire_strippers/wirestrip...>
> > I got lucky and ended up with pile of these from some aerospace
> > surplus outlet.  Very handy.  Just take care not to breath the fumes.
>
> Before retirement, many of my instrument designs had to work in
> high-temperature, corrosive environments, so I frequently used PTFE*
> insulated wires.  I purchased one of the Teledyne thermal strippers and was
> VERY pleased with its operation.  The next year I found one for sale at a
> hamfest for $5.  I snapped it up immediately for home use.  If you work
> with small gauge wires, and especially with PTFE insulated wires, I
> strongly recommend these units.
>
>     73, Dr. Barry L. Ornitz  WA4VZQ
>
> * A later job with W. L. Gore & Associates thoroughly indoctrinated in me
> that Teflon was a DuPont trademark!

We have a couple at work and I think they are the greatest thing since
sliced bread and I wanted one for home use but didnt have quite the
need to match the cost.

Not being lucky enough to find one for $5 I ground a notch in a hose
clamp and fastened it to my soldering iron. It works well on just
about anything except PTFE.

Jimmie

# 2153. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 14:11:19 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <645cddb4-3421-4970-8f0e-a8480015d69d@a37g2000pre.googlegroups.com>
Source record: 3740

On Dec 10, 9:27 pm, "thegrumpym...@gmail.com"
<thegrumpym...@gmail.com> wrote:
> Howdy,
>
> A 6L6 immersed in a can of peanut oil is an old timey final, smells
> good too.
>
> 73,
> Grumpy
> (Who can't get news express to work withg AIOE anymore.)
>
>
>
I tried doing that with a 4cx250 once. Never got it to work. Looking
back on it I should have mounted the base of the tube to the paint can
lid and hung it in the bucket upside down.
Hmmm, might be something fun to try this winter.

Jimmie

## 2154. Re: "Dual crimp" coax connectors? [Thermal Wire Strippers]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 17:36:05 UTC
From: SparkyGuy <sparkyguy@mumcrank.ck>
Message-ID: <0001HW.C5668F8500278D9CB01AD9AF@news.sf.sbcglobal.net>
Source record: 3741
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> Not being lucky enough to find one for $5 I ground a notch in a hose
> clamp and fastened it to my soldering iron.

Can't quite picture this. Got a photo?

# 2155. Re: "Dual crimp" coax connectors? [Thermal Wire Strippers]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 18:03:57 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <anj2k49t0epdc8ift0v8colsfa2st0dpeo@4ax.com>
Source record: 3742
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Wed, 10 Dec 2008 23:37:19 -0500, "NoSPAM" <unknown@nospam.org>
wrote:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:stsvj4phsvib8a4f2hr3jkbvnd965o5fun@4ax.com...
>
>> As long as the blades are sharp they work just fine. However, when
>> the blades get dull, the user tends to bend the cable to assist in the
>> cutting, which sometimes results in a nicked center wire. Cleaning up
>> the stripping job with a pair of diagonal cutters also causes
>> problems. Stripping is also difficult with Teflon insulated wire and
>> non-wicking insulation (marine coax), where the dielectric materials
>> are bonded to the conductors. The best way to strip these materials
>> and to be sure not to nick the wires is with a thermal wire stripper.
>> <http://www.teledyneinterconnect.com/products/wire_strippers/wirestrip.asp>
>> I got lucky and ended up with pile of these from some aerospace
>> surplus outlet. Very handy. Just take care not to breath the fumes.
>
>Before retirement, many of my instrument designs had to work in
>high-temperature, corrosive environments, so I frequently used PTFE*
>insulated wires. I purchased one of the Teledyne thermal strippers and was
>VERY pleased with its operation. The next year I found one for sale at a
>hamfest for $5. I snapped it up immediately for home use. If you work
>with small gauge wires, and especially with PTFE insulated wires, I
>strongly recommend these units.
>
> 73, Dr. Barry L. Ornitz WA4VZQ
>
>* A later job with W. L. Gore & Associates thoroughly indoctrinated in me
>that Teflon was a DuPont trademark!

Thanks much. I checked my email this morning and found one person
asking me to sell them one of these strippers, and two more asking
questions about their operation. Apparently, there's some interest so
I'll post my answers.

1. You can find various thermal wire strippers on eBay, usually for
peanuts. For example:
<http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=320323912948>
The problem is this style of stripper is only suitable for small
diameter wires and small diameter coax cables. RG-6/u can be done,
but it's tricky. Make sure you get the long jaws if you want
something fairly universal. The problem is not getting the jaws wide
enough. It's preventing the end of the coax cable from getting jammed

into the narrow part of the jaws.

2. Teledyne does make the TW-6 model, that's made specifically for coax cable.
<http://www.teledyneinterconnect.com/products/stripall/models.asp>
I have several of these. We used these in a production environment to strip RG-188/u with PTFE wrap insulation and dielectric. We tried using blades, but thermal stripping was far superior.

3. Note that most models come with various forms of power control. This is not mandatory, as I have become quite proficient at timing the push button for temperature control. However, if you want to avoid overheating, burned out tips, and meltdowns, make sure you get the temperature control. If the tips glow red, it's far too hot. Adjust the operating point with an infra-red optical thermometer,

4. You can make your own thermal strippers from a length of nichrome resistance heater wire and a small soldering iron. Remove the copper tip and replace with a piece of nichrome. I've also seen a production machine made from a plastic bag cutter/sealer and another from a foam cutter. A low voltage filament transformer and a variac can also be made to work. Obviously, some experimentation will be required, but it will get warm and eventually work. Nichrome wire is available at most hardware stores for repairing heaters, toasters, and telescope condensation prevention heaters. You will need to supply some spring tension as the wire stretches when it gets warm.

The problem with using wire is that it doesn't last very long. The large heating tips of the Teledyne strippers are sufficiently massive to survive for years of constant production line operation. I can't say the same for using wire.

I suspect that one of the handheld battery operated soldering irons, could be morphed into a thermal wire stripper by replacing the heating tip with a nichrome wire.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2156. Re: "Dual crimp" coax connectors? [Thermal Wire Strippers]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 18:12:09 UTC
From: John Smith <assemblywizard@gmail.com>
Message-ID: <ghrl5n$vih$1@news.albasani.net>
Source record: 3743
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:

[...]

Not being in the industry, I have never seen them.

However, I am having visions (sometimes I do that, yanno', must be the 60's or sumthin'? <grin> ) I see myself grabbing a small brad in a pair of needle nose, heating it red hot and running it about the diameter of a wire--in a pinch.

Replacing the high tech brad as necessary ... <straight face>

Regards,
JS

# 2157. Re: "Dual crimp" coax connectors? [Thermal Wire Strippers]

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 18:37:19 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <cqm2k453i9br4q9d0t3dc2ta9dnb9qluoi@4ax.com>
Source record: 3744
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Thu, 11 Dec 2008 10:12:09 -0800, John Smith
<assemblywizard@gmail.com> wrote:

>Jeff Liebermann wrote:
>
>[...]
>
>Not being in the industry, I have never seen them.

That's because everyone in the industry steals them, takes them home,
and uses them for the rest of their life. They're hard to find.

>However, I am having visions (sometimes I do that, yanno', must be the
>60's or sumthin'? <grin> ) I see myself grabbing a small brad in a pair
>of needle nose, heating it red hot and running it about the diameter of
>a wire--in a pinch.

Won't work. There's not enough thermal mass in your hot brad to do
the job. The hot brad will need to hit the coax braid, or wire center
conductor, in order to thermally cut through the insulation. Copper
is a very good thermal conductor. As soon as the hot brad touches the
copper, the heat gets sucked out of the brad rather rapidly. It might
work if you're careful or very fast, but methinks it's not very
practical.

Of course, you can use a large block of hot aluminum or copper with a
cutting edge, but that would be potentially dangerous and certainly
rather messy if you mishandled it. Of course, you're welcome to try
it. Have burn grease, Band-Aids, and a fire extinguisher ready.

>Replacing the high tech brad as necessary ... <straight face>

Incidentally, I got my experience with hot wire cutters (and burned
fingers) at my father's lingerie factory in Smog Angeles. We made our
own as the commercial versions were seriously overpriced. My
childhood wasn't totally wasted.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

# 2158. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-11 20:58:22 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <dc5059f2-63d7-4818-a518-1d9bb79bd062@y18g2000yqn.googlegroups.com>
Source record: 3745
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Dec 8, 12:07 pm, mjsi...@embarqmail.com wrote:
> I had this idea a while back, to thin out my stuff in what I think is
> a useful and interesting way.  Along the way I ended up having to buy
> a bunch of new stuff as well (e.g. the brand new tune and load
> variable caps).  So take a look - might be a fun way to spend some
> winter evenings.
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771
>
> 73,
> Mike, KK6GM

Hey OM

I should has learned to play the guitar. Instead I got into
electronics built my first xmitter in '67 using a 6BQ5 xtal osc and
6146A final.
Everything was hot. I used series twist lock caps in the ps, B&W coil,
with aligator clip adjust, multi elmac plate and tune caps, a tv set
power xformer, all that on a punched out 5x7x2 LMB chassis. Even the
Key was hot as I keyed the screen of the 6146A.

73 OM
n8zu

# 2159. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-12 18:02:40 UTC
From: mjsilva@embarqmail.com
Message-ID: <ab4948f6-89a2-4ae9-b128-31740dc76fde@k24g2000pri.googlegroups.com>
Source record: 3746
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Dec 11, 3:58 pm, raypsi <RBorow...@gmail.com> wrote:
> On Dec 8, 12:07 pm, mjsi...@embarqmail.com wrote:
>
> > I had this idea a while back, to thin out my stuff in what I think is
> > a useful and interesting way.  Along the way I ended up having to buy
> > a bunch of new stuff as well (e.g. the brand new tune and load
> > variable caps).  So take a look - might be a fun way to spend some
> > winter evenings.
>
> >http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771
>
> > 73,
> > Mike, KK6GM
>
> Hey OM
>
> I should has learned to play the guitar. Instead I got into
> electronics built my first xmitter in '67 using a 6BQ5 xtal osc and
> 6146A final.
> Everything was hot. I used series twist lock caps in the ps, B&W coil,
> with aligator clip adjust, multi elmac plate and  tune caps, a tv set
> power xformer, all that on a punched out 5x7x2 LMB chassis. Even the
> Key was hot as I keyed the screen of the 6146A.
>
> 73 OM
> n8zu

That's pretty impressive, fitting that on a 5x7 chassis!

Mike

## 2160. Power transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-12 18:11:22 UTC
From: Rich Klestinez <replytogroup@noplace.cc>
Message-ID: <iOx0l.2811$iB4.945@newsfe02.iad>
Source record: 3747

I am shuting down my shop after 40+ years of electronic repair services. Mostly tube type equipment.

I have several used transformers that could be used to make some tube type transmitters( low power ). Also bunches of new and NOS tubes. Just bunches of stuff.

One transformer has 478-0-478, 50vac bias winding and a 5v winding for a 5u4. It wieghs in at 7 pounds and is a horizontal thru-chases mount. USA shipping only.

send me an email;

((((( richklestinez(at)charter.net )))))

with INVENTORY REQUEST in the subject line.

Thanks for your interest.

Rich

## 2161. Reference oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-12 21:21:37 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <83d41cda-dca7-4709-adce-86dc13148353@f24g2000vbf.googlegroups.com>
Source record: 3748

Hi all,

Over the past few years, I've had the opportunity to save some decent reference oscillators from being thrown away, by removing them from scrap boards. They're typically good stability (temp. compensated), and reasonably low phase noise. I have 10MHz, 20MHz and 100MHz, and a couple others. Some have a voltage control input. All are 5V (but I know some will work down to 3.3V), logic output (but "logic" means PECL for the 100MHz ones). I'd be happy to send one or two to folk who have a specific reasonably immediate need for such a beast. If you're interested, drop me an email to let me know exactly what you're looking for and why you want it. I'll let you know if you made the cutoff. I may ask for shipping costs if I can't figure out how to send them cheaply enough but packaged safely. The oscillators will be free to good homes, though.

Cheers,
Tom

# 2162. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-12 23:09:21 UTC
From: Theo <theodore.twyler@ntlworld.com>
Message-ID: <DaC0l.16363$Ax1.3514@newsfe29.ams2>
Source record: 3749
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

<mjsilva@embarqmail.com> wrote in message
news:ab4948f6-89a2-4ae9-b128-31740dc76fde@k24g2000pri.googlegroups.com...
On Dec 11, 3:58 pm, raypsi <RBorow...@gmail.com> wrote:
> On Dec 8, 12:07 pm, mjsi...@embarqmail.com wrote:
>
> > I had this idea a while back, to thin out my stuff in what I think is
> > a useful and interesting way. Along the way I ended up having to buy
> > a bunch of new stuff as well (e.g. the brand new tune and load
> > variable caps). So take a look - might be a fun way to spend some
> > winter evenings.
>
> >http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771
>
> > 73,
> > Mike, KK6GM
>
> Hey OM
>
> I should has learned to play the guitar. Instead I got into
> electronics built my first xmitter in '67 using a 6BQ5 xtal osc and
> 6146A final.
> Everything was hot. I used series twist lock caps in the ps, B&W coil,
> with aligator clip adjust, multi elmac plate and tune caps, a tv set
> power xformer, all that on a punched out 5x7x2 LMB chassis. Even the
> Key was hot as I keyed the screen of the 6146A.
>
> 73 OM
> n8zu

That's pretty impressive, fitting that on a 5x7 chassis!

(Actually 5ft x 7ft !) ;-)

## 2163. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-13 01:25:50 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <Q3E0l.7119$dc4.167@bignews2.bellsouth.net>
Source record: 3750

Tim Wescott wrote:
> ken scharf wrote:
>> Tim Wescott wrote:
>>> On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:
>>>
>>>> After years of avoiding morse code I am finally getting into it. the
>>>> ideal of operating a very simple transmitter appeals to my junkbox/
>>>> trashcan construction mentality.
>>>> I am looking for a substitue for a 6L6 that has the plate brought out
>>>> the top. I was trying to build a little Glowbug transmitter but was
>>>> having all kinds of problems neutralizing the the thing. I think I
>>>> would
>>>> have better luck if I can separate the grid and plate circuits from
>>>> each
>>>> other. I am considering an 807 as a replacement Suggestions would be
>>>> appreciated.
>>>>
>>>> Jimmie
>>>
>>> Dunno if it's been mentioned yet -- 2E26. The 807 is _not_ a 6L6 in
>>> a different envelope -- it's quit arguably the 6L6's big brother, but
>>> it's got different ratings; it could probably be shoe-horned into a
>>> circuit designed for the 6L6, but you'd be missing out on about 6dB
>>> of final output power.
>>>
>> The 807 IS a 6L6G with a 5 pin base and the plate connected to the top.
>> The published ratings of the 6L6G look different than the 807 because of
>
> -- snip --
>
>> The type 1614 is a metal tube based on the 6L6. It is a transmitting
>> version, and probably has additional shielding. Otherwise its internal
>> structure is the same as the 6L6 metal type.
>>
> How is the 6L6 metal type different internally from the 6L6G?
>
I've never xrayed or took a 6L6M apart. However the 6L6M would have
shorter leads and different inter-electrode capacitance specs due to the
metal envelope and the shorter leads. Also the metal envelope might
lead to a lower max plate voltage rating due to the danger of arc-over
to the envelope (which is connected to pin 1 for ground/shield). The
glass envelope version of the tube has more electrical insulation in
this regard. The 1614 is a transmitting version of the 6L6M. Other
than being spec'ed for ICAS operation and *maybe* having additional

internal shielding it's identical to the 6L6M.

# 2164. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-13 01:29:55 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <F7E0l.7121$dc4.1599@bignews2.bellsouth.net>
Source record: 3751

JIMMIE wrote:
> On Dec 10, 9:27 pm, "thegrumpym...@gmail.com"
> <thegrumpym...@gmail.com> wrote:
>> Howdy,
>>
>> A 6L6 immersed in a can of peanut oil is an old timey final, smells
>> good too.
>>
>> 73,
>> Grumpy
>> (Who can't get news express to work withg AIOE anymore.)
>>
>>
>>
> I tried doing that with a 4cx250 once. Never got it to work. Looking
> back on it I should have mounted the base of the tube to the paint can
> lid and hung it in the bucket upside down.
> Hmmm, might be something fun to try this winter.
>
> Jimmie
I recall an article on using a 4cx250 with water cooling. Actually it sat upside down in a pool of water which was allowed to boil off from the heat of the tube. Which means the tube didn't get hotter than 100 degrees C (until all the water boiled away). This is known as 'vapor phase cooling'. Believe it or not you can cool a tube with STEAM!

# 2165. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-13 01:42:46 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <IjE0l.7125$dc4.741@bignews2.bellsouth.net>
Source record: 3752

Tim Wescott wrote:
> ken scharf wrote:
>> Tim Wescott wrote:
>>> On Thu, 04 Dec 2008 06:23:48 -0800, JIMMIE wrote:
>>>
>>>> After years of avoiding morse code I am finally getting into it. the
>>>> ideal of operating a very simple transmitter appeals to my junkbox/
>>>> trashcan construction mentality.
>>>> I am looking for a substitue for a 6L6 that has the plate brought out
>>>> the top. I was trying to build a little Glowbug transmitter but was
>>>> having all kinds of problems neutralizing the the thing. I think I
>>>> would
>>>> have better luck if I can separate the grid and plate circuits from
>>>> each
>>>> other. I am considering an 807 as a replacement Suggestions would be
>>>> appreciated.
>>>>
>>>> Jimmie
>>>
>>> Dunno if it's been mentioned yet -- 2E26. The 807 is _not_ a 6L6 in
>>> a different envelope -- it's quit arguably the 6L6's big brother, but
>>> it's got different ratings; it could probably be shoe-horned into a
>>> circuit designed for the 6L6, but you'd be missing out on about 6dB
>>> of final output power.
>>>
>> The 807 IS a 6L6G with a 5 pin base and the plate connected to the top.
>> The published ratings of the 6L6G look different than the 807 because
>> of their intended use. ICAS ratings for the 6L6G were never published.
>> Also the 807 has additional shielding and insulation over the 6L6G
>> that make it usable at higher frequencies and voltages than the 6L6G.
>> Most 807's have ceramic spaces to support the plate which are lacking
>> in the 6L6G. But make no mistake about it, the two tubes share the
>> IDENTICAL cathode, grids, and plate structures.
>>
>> The 6BG6G tv sweep tube IS an 807 with an octal base. It has the same
>> ceramic plate supports, but lacks the extra rf shielding.
>>
>> The 1625 is an 807 with a 12.6 volt heater and a large (same as type
>> '59) 7 pin base.
>>
>> The type 1614 is a metal tube based on the 6L6. It is a transmitting
>> version, and probably has additional shielding. Otherwise its internal
>> structure is the same as the 6L6 metal type.
>>

>> The type 1619 is sorta kinda a 6L6 with a directly heated 2.5v cathode.
>> Same metal bulb as the 6L6. Specs' are different due to the different
>> element spacing thanks to the filament cathode. This tube is often
>> triode connected to replace 45's and 2A3's in old radios with a socket
>> adapter.
>>
>> As a result the of the construction differences regarding shielding,
>> the 807 often would NOT need neutralization while 6L6G's and 6BG6G
>> tubes used as rf power amps do.
>>
>>
>> The 6L6GA was identical to the 6L6G except that the bulb shrunk from
>> an ST16 to an ST14 size. The 6L6GB was identical except for the bulb
>> changing again to a T14. The 6L6GC is a totally different bottle with
>> higher plate and screen dissipation and plate voltage ratings. The
>> 6L6GC was said to be a plug in replacement for the older 6L6 tubes,
>> but RCA kept the 6L6GB around for a while anyway. In fact a bias
>> re-adjustment was a good idea when replacing an older 6L6 with the 'GC
>> version if a cathode bias resistor wasn't used.
>>
> I bow to your superior knowledge.
>
> How do you know? Time spent busting tubes and looking inside? Old-time
> service and/or circuit design experience? Experience building tubes?
>
> I'd love to see a detailed family tree for some of the more popular tube
> types.
>
I've done a lot of reading on this subject. Old QST's (from the '30s),
books about tubes, and I've smashed a few open (dead ones of course).
I also have a small collection of old tube manuals (in print and pdf off
the 'web).
BTW the 6L6 family tree is quite large and includes bottles such as the
7027/A (really a 6L6 with a bigger plate and TWO base pin connections
for G1 and G2). Most sweep tubes are descendants of the 6L6 (the 6BG6G
directly and others indirectly). Other 'hifi' output BP tubes such as
the 6550, and the 'KT' series are based on the 6L6 with larger elements
for handling more power. The British have in interesting twist on the
language. KT stands for 'Kinkless Tetrode' which refers to the lack of
the dip in plate current as the screen voltage reaches the critical
point of secondary emission in tetrodes. BP tubes are considered
tetrodes since they lack a third grid, but those BP tubes with beam
deflection elements should be considered 5 element tubes. (Not all BP
tubes have the deflection plates. The critical parts of the BP formula
are aligned turns on G1 and G2, critical spacing between G2 and the
plate, and optionally deflection elements to focus the electrons into
sheets. Having a plate with 'catch pockets' such as on the 4-400 works
as well as the BD elements.)

# 2166. Re: icom 7400 ext.spkr socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-13 02:44:28 UTC
From: JB <nospam@goofball.net>
Message-ID: <gkF0l.1312$c35.901@nwrddc02.gnilink.net>
Source record: 3753

> Need to replace or resolder ext. speaker socket on Icom 7400,and wonder if
> anyone has knowhow on this job. Thanks for any info.!
>
> doug.
>
$50 +shipping and parts
http://infotech.awardspace.com/

# 2167. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-13 18:49:58 UTC
From: mjsilva@embarqmail.com
Message-ID: <6d62330c-f9a1-494e-b7c0-4fc5c68c3433@o40g2000prn.googlegroups.com>
Source record: 3754
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Dec 12, 6:09 pm, "Theo" <theodore.twy...@ntlworld.com> wrote:
> <mjsi...@embarqmail.com> wrote in message
>
> news:ab4948f6-89a2-4ae9-b128-31740dc76fde@k24g2000pri.googlegroups.com...
> On Dec 11, 3:58 pm, raypsi <RBorow...@gmail.com> wrote:
>
>
>
>
>
> > On Dec 8, 12:07 pm, mjsi...@embarqmail.com wrote:
>
> > > I had this idea a while back, to thin out my stuff in what I think is
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> > > a bunch of new stuff as well (e.g. the brand new tune and load
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> > >http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771
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> > > 73,
> > > Mike, KK6GM
>
> > Hey OM
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> > I should has learned to play the guitar. Instead I got into
> > electronics built my first xmitter in '67 using a 6BQ5 xtal osc and
> > 6146A final.
> > Everything was hot. I used series twist lock caps in the ps, B&W coil,
> > with aligator clip adjust, multi elmac plate and tune caps, a tv set
> > power xformer, all that on a punched out 5x7x2 LMB chassis. Even the
> > Key was hot as I keyed the screen of the 6146A.
>
> > 73 OM
> > n8zu
>
> That's pretty impressive, fitting that on a 5x7 chassis!
>
> (Actually 5ft x 7ft !)  ;-)- Hide quoted text -
>
> - Show quoted text -

You mean kinda like this?

http://i408.photobucket.com/albums/pp169/snarflemike/SCAN0006.jpg

# 2168. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-13 23:38:34 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <0a1be5d2-178a-4874-8ef7-736970ac7404@s14g2000vbp.googlegroups.com>
Source record: 3755
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Dec 13, 1:49 pm, mjsi...@embarqmail.com wrote:
> On Dec 12, 6:09 pm, "Theo" <theodore.twy...@ntlworld.com> wrote:
>
>
>
> > <mjsi...@embarqmail.com> wrote in message
>
> >news:ab4948f6-89a2-4ae9-b128-31740dc76fde@k24g2000pri.googlegroups.com...
> > On Dec 11, 3:58 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > On Dec 8, 12:07 pm, mjsi...@embarqmail.com wrote:
>
> > > > I had this idea a while back, to thin out my stuff in what I think is
> > > > a useful and interesting way. Along the way I ended up having to buy
> > > > a bunch of new stuff as well (e.g. the brand new tune and load
> > > > variable caps). So take a look - might be a fun way to spend some
> > > > winter evenings.
>
> > > >http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771
>
> > > > 73,
> > > > Mike, KK6GM
>
> > > Hey OM
>
> > > I should has learned to play the guitar. Instead I got into
> > > electronics built my first xmitter in '67 using a 6BQ5 xtal osc and
> > > 6146A final.
> > > Everything was hot. I used series twist lock caps in the ps, B&W coil,
> > > with aligator clip adjust, multi elmac plate and tune caps, a tv set
> > > power xformer, all that on a punched out 5x7x2 LMB chassis. Even the
> > > Key was hot as I keyed the screen of the 6146A.
>
> > > 73 OM
> > > n8zu
>
> > That's pretty impressive, fitting that on a 5x7 chassis!
>
> > (Actually 5ft x 7ft !)  ;-)- Hide quoted text -
>
> > - Show quoted text -
>
> You mean kinda like this?

>
> http://i408.photobucket.com/albums/pp169/snarflemike/SCAN0006.jpg

My neighbor gave me one of those 5 tube AM BCB radio kits back when I was a kid. It was part of an electronics correspondence course he was taking. The idea was to put it together breadboard fashion on the schematic then when you got it working move it to the chassis. I thought it was cool just keeping it on the breadboard and hauled it around for years until it finally got stolen out of storage about 20 years ago. Over the years I had tested several mods on it. HF converters, adding another IF stage, a BFO, Q multiplier and reworked the series filament string for parallel operation. I'm sure if it was still around I would still be tinkering with it.

Jimmie

# 2169. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 02:29:26 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <5a_0l.7945$UI2.3187@bignews6.bellsouth.net>
Source record: 3756
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

raypsi wrote:
> On Dec 8, 12:07 pm, mjsi...@embarqmail.com wrote:
>> I had this idea a while back, to thin out my stuff in what I think is
>> a useful and interesting way. Along the way I ended up having to buy
>> a bunch of new stuff as well (e.g. the brand new tune and load
>> variable caps). So take a look - might be a fun way to spend some
>> winter evenings.
>>
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771
>>
>> 73,
>> Mike, KK6GM
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> Hey OM
>
> I should has learned to play the guitar. Instead I got into
> electronics built my first xmitter in '67 using a 6BQ5 xtal osc and
> 6146A final.
> Everything was hot. I used series twist lock caps in the ps, B&W coil,
> with aligator clip adjust, multi elmac plate and tune caps, a tv set
> power xformer, all that on a punched out 5x7x2 LMB chassis. Even the
> Key was hot as I keyed the screen of the 6146A.
>
> 73 OM
> n8zu
I didn't build a transmitter when I got my Novice License (in my teens), though I did start collecting parts to do so. I was going to build a rig using a 6GK6 oscillator and an 807 final. But, on Washington's birthday I went down to Harrison's in NYC for their big yearly sale. They had a stack of Elmac AF67 transmitters for about $15 each, so I got one. I had to build a power supply for it though. This I did using a junk salvaged from old TV sets found curbside on garbage pick up days.

I used to ride around the neighborhood on my bicycle looking for thrown out TV sets. I carried enough tools with me to pull a chassis out of a cabinet and lug it home. Then I'd tear it apart in the basement and keep the goodies.

Seems all of those AF67's had the same problem, burned out modulation transformers. But they worked great on CW with crystal control. Some of them also had bad VFO's.

Years later when my brother got his novice license we found him a used Lafayette HA350 receiver and I built him a two tube transmitter.

Actually I used parts from my now defunct AF67 stuffed into a large minibox as a chassis. It used the 6GK6 (from the junk box) and a 6146 in the final (from the AF67). I wonder if he still has that transmitter lost in his basement? I might want it (and the HA350) back.

# 2170. Wanted BC454 bfo coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 02:53:43 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <Sw_0l.7953$UI2.6555@bignews6.bellsouth.net>
Source record: 3757

Anybody have a BFO coil from a BC454 receiver?
I have a homebrew receiver project in mind using some of the
1415 khz IF transformers out of one of these but I don't have
the BFO coil.

# 2171. Re: Wanted BC454 bfo coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 07:30:16 UTC
From: highlandham <rfburns@nospam.com>
Message-ID: <PeednWs5At2MK9nUnZ2dnUVZ8uGdnZ2d@pipex.net>
Source record: 3758

ken scharf wrote:
> Anybody have a BFO coil from a BC454 receiver?
> I have a homebrew receiver project in mind using some of the
> 1415 khz IF transformers out of one of these but I don't have
> the BFO coil.
==========
This being a homebrew NG.......would it not be possible to make the BFO coil ,or is it a RF transformer , yourself ?

Frank KN6WH

## 2172. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 16:20:56 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <53d62848-294c-4264-80f3-68e772536ce4@i24g2000prf.googlegroups.com>
Source record: 3759

On Nov 22, 8:43 pm, Stray Dog <sdog2...@sdf.lonestar.org> wrote:
> Despite what at least one other person responding to this said, I can rest
> assure you that if you run a doubler/multiplier stage even in a linear
> mode, AND if you tune the output of that stage to the multiple harmonic,
> you will definitely get output at that harmonic frequency which is
> stronger than the input drive voltage.

Huh? No way... you MUST have non-linearities to make a doubler.

# 2173. Re: Wanted BC454 bfo coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 18:00:27 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <OLb1l.7959$nD1.7880@bignews5.bellsouth.net>
Source record: 3760

highlandham wrote:
> ken scharf wrote:
>> Anybody have a BFO coil from a BC454 receiver?
>> I have a homebrew receiver project in mind using some of the
>> 1415 khz IF transformers out of one of these but I don't have
>> the BFO coil.
> ====================================
> This being a homebrew NG.......would it not be possible to make the BFO
> coil ,or is it a RF transformer , yourself ?
>
> Frank KN6WH
I do have a few extra 1415 khz if transformers so I could probably
convert one into a bfo coil if I can't find the real McCoy.

# 2174. PA3AKE Project Update - DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 20:32:26 UTC
From: "Gian, I7SWX" <i7swx@yahoo.com>
Message-ID: <f4882ffa-49e7-4c25-917d-a2de727c6e07@b38g2000prf.googlegroups.com>
Source record: 3761

Hi all,

I have been talking to Colin Horrabin, G3SBI, and we spoke about the good work Meirtein Bakker, PA3AKE, is doing on his high performance analog front-end receiver using the H-Mode Mixer.
Martein is a very good research engineer and amateur radio. With his knowledge, determination and attention, using homemade test equipment and a W&G spectrum analyzer he has identified a design problem in the AD9910 which will probably also affect the AD9912 and other recent DDS chips by ADI. Colin was able to talk to Analog Device high speed DDS group in North Carolina. There was a great deal of reluctance to accept Martein's findings. Eventually they were able to duplicate his results and they were very grateful to Martein because the same mistake will not be made in their new designs. We have a very low phase noise with ADI 9910-12 DDS but we are discovering AM noise !!!! a problem not present with the AD9951.
As Colin stated, the remarkable thing is that it has taken an amateur radio state of the art receiver project to identify this and it has not been found by Analog Devices big customers with all their high tech test equipment.
The bad news is that it is unlikely there will be a chip revision, even though the fix is simple unless there is pressure from a major customer. Maybe this is a good pressure some of our colleagues could apply to ADI from their engineering key positions.
Analog Devices is a company we all have a lot of respect for. The high speed DDS chips are a major technical achievement and are useful to our hobby as Martein will show. During chip development the design team probably paid too much attention to results from their high tech measuring equipment when by design it rejected a device parameter they should also have been looking for.
Martein has just published an update to report on the evaluation of the AD9910 DDS chip to be used as the DDS-Local Oscillator that complements the Down Conversion Frontend. The research regarding the AD9910 and especially its noise characteristics is finished. Those interested can visit his web page:

http://www.xs4all.nl/~martein/pa3ake/hmode/index.html

73 and with the occasion Season’s Greetings

Gian
I7SWX

## 2175. Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 21:27:36 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <2e974a98-78bf-4310-9661-826948e0fe2c@17g2000vbf.googlegroups.com>
Source record: 3762

I have some door kick panels, some brass and a couple of Al ones. I have used these before to make enclosures but in the past I always cut them with a reciprocating saw then did a lot of filing to get the edges straight and pretty. I was wondering if I could cut these using my table saw. The motor is sealed so I don't have to worry about getting metal shavings in it. Anyone here ever done this before. If so what kind of blade did you use? Were there any special techniques you applied?

It seems like this would save me a lot of finish work if I could do it.

Jimmie

# 2176. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 21:54:28 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <k4mdncusi9ipHdjUnZ2dnUVZ_o7inZ2d@posted.cpinternet>
Source record: 3763

JIMMIE wrote:

> I have some door kick panels, some brass and a couple of Al ones. I
> have used these before to make enclosures but in the past I always cut
> them with a reciprocating saw then did a lot of filing to get the
> edges straight and pretty. I was wondering if I could cut these using
> my table saw. The motor is sealed so I don't have to worry about
> getting metal shavings in it. Anyone here ever done this before. If so
> what kind of blade did you use? Were there any special techniques you
> applied?
>
> It seems like this would save me a lot of finish work if I could do
> it.
>
> Jimmie

I have used high speed small table slitting saws to cut small pieces
of non-ferrous; for larger projects, I have used a table saw, radial-arm
saw or circular saw, with the blade reversed (old plywood blades generally).
Except for the large kerf, I get straight edges. For most projects however
I resort to the hand hack saw and file ;)

One can make a high speed slitting table saw from a lateral mounting of
a dremel tool; use multiple emery cutoff wheels on the arbor or a diamond
wheel.

Michael

Michael

# 2177. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 22:12:26 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <8vf1l.8341$UI2.22@bignews6.bellsouth.net>
Source record: 3764

msg wrote:
> JIMMIE wrote:
>
>> I have some door kick panels, some brass and a couple of Al ones. I
>> have used these before to make enclosures but in the past I always cut
>> them with a reciprocating saw then did a lot of filing to get the
>> edges straight and pretty. I was wondering if I could cut these using
>> my table saw. The motor is sealed so I don't have to worry about
>> getting metal shavings in it. Anyone here ever done this before. If so
>> what kind of blade did you use? Were there any special techniques you
>> applied?
>>
>> It seems like this would save me a lot of finish work if I could do
>> it.
>>
>> Jimmie
>
> I have used high speed small table slitting saws to cut small pieces
> of non-ferrous; for larger projects, I have used a table saw, radial-arm
> saw or circular saw, with the blade reversed (old plywood blades
> generally).
> Except for the large kerf, I get straight edges. For most projects however
> I resort to the hand hack saw and file ;)
>
> One can make a high speed slitting table saw from a lateral mounting of
> a dremel tool; use multiple emery cutoff wheels on the arbor or a diamond
> wheel.
>
> Michael
>
> Michael
>
I've heard of people cutting non-ferrous metal with a table saw.
If the metal is not too thin it should work, thin metal may curl up and
bind in the saw, or worse go flying off the table!
If you must cut thin metal back it with a piece of thin hardwood.

I've also heard of people mounting the blade backwards so the teeth face
away from the work to cut aluminum. Not sure how this helps, but others
say it works.

# 2178. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 22:40:15 UTC
From: msg <msg@_cybertheque.org_>
Message-ID: <BNydnXJR45ZzF9jUnZ2dnUVZ_ovinZ2d@posted.cpinternet>
Source record: 3765

ken scharf wrote:

<snip>
> I've also heard of people mounting the blade backwards so the teeth face
> away from the work to cut aluminum. Not sure how this helps, but others
> say it works.

Perhaps I should have said 'backward' rather than 'reversed' as the latter may imply reversed rotation. Mounting the blade opposite to its normal orientation is what I meant and that has worked for me on light gauge metal. For thicker Al and brass, I have used the dremel slitting saw method.

Michael

# 2179. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 22:40:38 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <MXf1l.5628$hs1.3621@newsfe04.iad>
Source record: 3766

"JIMMIE" <jimmie68@gmail.com> wrote in message
news:2e974a98-78bf-4310-9661-826948e0fe2c@17g2000vbf.googlegroups.com...
>I have some door kick panels, some brass and a couple of Al ones. I
> have used these before to make enclosures but in the past I always cut
> them with a reciprocating saw then did a lot of filing to get the
> edges straight and pretty. I was wondering if I could cut these using
> my table saw. The motor is sealed so I don't have to worry about
> getting metal shavings in it. Anyone here ever done this before. If so
> what kind of blade did you use? Were there any special techniques you
> applied?
>
> It seems like this would save me a lot of finish work if I could do it.

I have cut hard aluminum using a table saw with a tungsten carbide blade.
You have to be careful to feed the work slowly to the saw if you want
smooth edges. SAFETY GLASSES OR GOGGLES ARE A MUST!

73, Dr. Barry L. Ornitz WA4VZQ

# 2180. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-14 22:57:30 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812142250080.23242@sdf.lonestar.org>
Source record: 3767

On Sun, 14 Dec 2008, Telstar Electronics wrote:

> Date: Sun, 14 Dec 2008 08:20:56 -0800 (PST)
> From: Telstar Electronics <briangriffey@sbcglobal.net>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: Doubling
>
> On Nov 22, 8:43 pm, Stray Dog <sdog2...@sdf.lonestar.org> wrote:
>> Despite what at least one other person responding to this said, I can rest
>> assure you that if you run a doubler/multiplier stage even in a linear
>> mode, AND if you tune the output of that stage to the multiple harmonic,
>> you will definitely get output at that harmonic frequency which is
>> stronger than the input drive voltage.
>
> Huh? No way... you MUST have non-linearities to make a doubler.

All tubes (and transistors, etc) have non-linearities (if the transfer characteristics are non-straight lines) if that is what you are talking about.

However, I have observed output on a scope of second harmonics (and, yes, the time base was set right and auto-self triggering) and the amplifier was running no higher than Class B. You should actually try this yourself and see for yourself. Tune the output to the second harmonic and you will see grow out of the vally new "peaks" corresponding to that second harmonic.

I don't know what the solid state gear is doing, but from many schematics of the vintage tube gear I'm familiar with show, and measure, biasing for linear operation, even in stages meant to multiply frequency.

# 2181. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 02:22:56 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <6cj1l.8926$5P1.7597@newsfe13.iad>
Source record: 3768

"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
news:53d62848-294c-4264-80f3-68e772536ce4@i24g2000prf.googlegroups.com...
>On Nov 22, 8:43 pm, Stray Dog <sdog2...@sdf.lonestar.org> wrote:
?> Despite what at least one other person responding to this said, I can rest
>> assure you that if you run a doubler/multiplier stage even in a linear
>> mode, AND if you tune the output of that stage to the multiple harmonic,
>> you will definitely get output at that harmonic frequency which is
>> stronger than the input drive voltage.
>
>Huh? No way... you MUST have non-linearities to make a doubler.

Actually you do not need any nonlinearity to make a doubler (quadrupler, etc.).

Assume you have two Class B (or AB) stages that are driven in push-pull. The outputs are connected in parallel. And to make things even more linear, let each stage have a resistive load. Each stage will produce a linearly amplified (but inverted) version of the input signal FOR THE POSITIVE HALF of the driving waveform only. Being driven 180 degrees out of phase with the input signal, the second stage will produce a linearly amplified but (again inverted) version of the input signal FOR THE NEGATIVE HALF of the driving waveform. Both outputs will have a DC offset of the plate (collector, drain) voltage.

The resultant waveform with the outputs in parallel will look like much like a full wave rectified version of the input signal subtracted from the plate voltage. To express this mathematically, let the input signal be expressed as:

Vin = A sin(wt)

Now let the voltage gain of each stage be "-k" and the plate voltage be "B". The resultant waveform of the two stages connected in parallel will be:

Vout = B - abs[A*k sin(wt)] where "abs" is the absolute value

Vout = B - A*k sin(wt) for 0 < wt < Pi and
= B + A*k sin(wt) for Pi < wt > 2Pi or alternately for -Pi < wt <0

We can then calculate the Fourier series of this waveform to determine its spectrum. I will not present the calculations here as it is too difficult to show the integration over defined integrals using only plain text (and I doubt many readers will have math fonts anyway). If you wish to see the math for the Fourier series for a number of functions, read:
http://www.maths.qmul.ac.uk/~agp/calc3/notes2.pdf or
http://www.physics.hku.hk/~phys2325/notes/chap7.doc.

Vout = B - 2*A*K/Pi * [1 - SUMMATION {2*cos(nwt)/(n*n - 1)] for n=2, 4, 6, 8...

Note that the original frequency has been eliminated and that only even order harmonics are present, and that the amplitudes drop off quite rapidly. For example, the fourth harmonic

will be one fifth of the second harmonic.

For those that need a simplified explanation of Fourier series, Don Lancaster wrote a good article that can be found at:
http://www.tinaja.com/glib/muse90.pdf. I always thought Don had a ham license but I could not find one.

In a real implementation of this multiplier, a tuned circuit would be used as the plate load. The Q of this tuned circuit will assure that only the second harmonic is present in the output. The two stages would need to be well balanced if cancellation of odd harmonics and the fundamental is required.

73, Dr. Barry L. Ornitz WA4VZQ

POSTSCRIPT:

Now let me describe how it is possible to produce ONLY the second harmonic. Instead of using two Class B or AB stages, it is possible to use triodes operating where their plate current is proportional to the square of the grid voltage. Driving the two such stages in push-pull with the outputs in parallel with a resistive load, the output waveform will be:

Vout = B - A*A*k sin(wt)*sin(wt)

Using a trigonometric identity {see:
http://en.wikipedia.org/wiki/List_of_trigonometric_identities},

sin(x)*sin(x) = sin(x)^2 = 0.5[1-cos(2x)]

thus Vout = B - A*A*K/2 + A*A*k/2 cos(2wt)

This shows that only the second harmonic is found at the output.

# 2182. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 03:08:11 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <nSj1l.8928$5P1.2861@newsfe13.iad>
Source record: 3769

NoSPAM wrote:
> "Telstar Electronics" <briangriffey@sbcglobal.net
> <mailto:briangriffey@sbcglobal.net>> wrote in message
> news:53d62848-294c-4264-80f3-68e772536ce4@i24g2000prf.googlegroups.com...
> >On Nov 22, 8:43 pm, Stray Dog <sdog2...@sdf.lonestar.org
> <mailto:sdog2...@sdf.lonestar.org>> wrote:
> ?> Despite what at least one other person responding to this said, I
> can rest
> >> assure you that if you run a doubler/multiplier stage even in a linear
> >> mode, AND if you tune the output of that stage to the multiple
> harmonic,
> >> you will definitely get output at that harmonic frequency which is
> >> stronger than the input drive voltage.
> >
> >Huh? No way... you MUST have non-linearities to make a doubler.
>
> Actually you do not need any nonlinearity to make a doubler
> (quadrupler, etc.).
>
> Assume you have two Class B (or AB) stages that are driven in
> push-pull. The outputs are connected in parallel. And to make things
> even more linear, let each stage have a resistive load. Each stage
> will produce a linearly amplified (but inverted) version of the input
> signal FOR THE POSITIVE HALF of the driving waveform only. Being
> driven 180 degrees out of phase with the input signal, the second
> stage will produce a linearly amplified but (again inverted) version
> of the input signal FOR THE NEGATIVE HALF of the driving waveform.
> Both outputs will have a DC offset of the plate (collector, drain)
> voltage.
Class B or even Class AB in the circuit you described are non-linear.
Try that circuit
with Class A biasing.

Bill K7NOM

>
> The resultant waveform with the outputs in parallel will look like
> much like a full wave rectified version of the input signal subtracted
> from the plate voltage. To express this mathematically, let the input
> signal be expressed as:
>
> Vin = A sin(wt)
>
> Now let the voltage gain of each stage be "-k" and the plate voltage
> be "B". The resultant waveform of the two stages connected in

> parallel will be:
>
> Vout = B - abs[A*k sin(wt)] where "abs" is the absolute value
>
> Vout = B - A*k sin(wt) for 0 < wt < Pi and
> = B + A*k sin(wt) for Pi < wt > 2Pi or
> alternately for -Pi < wt <0
>
> We can then calculate the Fourier series of this waveform to determine
> its spectrum. I will not present the calculations here as it is too
> difficult to show the integration over defined integrals using only
> plain text (and I doubt many readers will have math fonts anyway). If
> you wish to see the math for the Fourier series for a number of
> functions, read:
> http://www.maths.qmul.ac.uk/~agp/calc3/notes2.pdf
> <http://www.maths.qmul.ac.uk/%7Eagp/calc3/notes2.pdfhttp://www.physics.hku.hk/%7Ephys232
5/notes/chap7.doc> or
> _http://www.physics.hku.hk/~phys2325/notes/chap7.doc
> <http://www.physics.hku.hk/%7Ephys2325/notes/chap7.doc>._
> Vout = B - 2*A*K/Pi * [1 - SUMMATION {2*cos(nwt)/(n*n - 1)] for n=2,
> 4, 6, 8...
>
> Note that the original frequency has been eliminated and that only
> even order harmonics are present, and that the amplitudes drop off
> quite rapidly. For example, the fourth harmonic will be one fifth of
> the second harmonic.
>
> For those that need a simplified explanation of Fourier series, Don
> Lancaster wrote a good article that can be found at:
> http://www.tinaja.com/glib/muse90.pdf. I always thought Don had a ham
> license but I could not find one.
>
> In a real implementation of this multiplier, a tuned circuit would be
> used as the plate load. The Q of this tuned circuit will assure that
> only the second harmonic is present in the output. The two stages
> would need to be well balanced if cancellation of odd harmonics and
> the fundamental is required.
>
> 73, Dr. Barry L. Ornitz WA4VZQ
>
>
> POSTSCRIPT:
>
> Now let me describe how it is possible to produce ONLY the second
> harmonic. Instead of using two Class B or AB stages, it is possible
> to use triodes operating where their plate current is proportional to
> the square of the grid voltage. Driving the two such stages in
> push-pull with the outputs in parallel with a resistive load, the
> output waveform will be:
>

> Vout = B - A*A*k sin(wt)*sin(wt)
>
> Using a trigonometric identity {see:
> http://en.wikipedia.org/wiki/List_of_trigonometric_identities},
>
> sin(x)*sin(x) = sin(x)^2 = 0.5[1-cos(2x)]
>
> thus Vout = B - A*A*K/2 + A*A*k/2 cos(2wt)
>
> This shows that only the second harmonic is found at the output.
>
>

## 2183. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 04:27:11 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <B0l1l.1290$fv3.794@newsfe06.iad>
Source record: 3770

"Bill Janssen" <billj@ieee.org> wrote in message
news:nSj1l.8928$5P1.2861@newsfe13.iad...
> NoSPAM wrote:
>> "Telstar Electronics" <briangriffey@sbcglobal.net
>> <mailto:briangriffey@sbcglobal.net>> wrote in message
>> news:53d62848-294c-4264-80f3-68e772536ce4@i24g2000prf.googlegroups.com...
>> >On Nov 22, 8:43 pm, Stray Dog <sdog2...@sdf.lonestar.org
>> <mailto:sdog2...@sdf.lonestar.org>> wrote:
>> ?> Despite what at least one other person responding to this said, I can
>> rest
>> >> assure you that if you run a doubler/multiplier stage even in a
>> >> linear
>> >> mode, AND if you tune the output of that stage to the multiple
>> harmonic,
>> >> you will definitely get output at that harmonic frequency which is
>> >> stronger than the input drive voltage.
>> >
>> >Huh? No way... you MUST have non-linearities to make a doubler.
>> Actually you do not need any nonlinearity to make a doubler
>> (quadrupler, etc.).
>> Assume you have two Class B (or AB) stages that are driven in
>> push-pull. The outputs are connected in parallel. And to make things
>> even more linear, let each stage have a resistive load. Each stage will
>> produce a linearly amplified (but inverted) version of the input signal
>> FOR THE POSITIVE HALF of the driving waveform only. Being driven 180
>> degrees out of phase with the input signal, the second stage will
>> produce a linearly amplified but (again inverted) version of the input
>> signal FOR THE NEGATIVE HALF of the driving waveform. Both outputs will
>> have a DC offset of the plate (collector, drain) voltage.
> Class B or even Class AB in the circuit you described are non-linear. Try
> that circuit
> with Class A biasing.
>
> Bill K7NOM

All that is really required is that the active devices have a different
gain with positive input signals than with negative input signals. This is
easily achieved with Class B and Class AB stages. As long as both stages
are identical the fundamental and odd order harmonics will cancel. You are
correct that with two Class A stages where the gain is identical for either
polarity of input, the output signal will perfectly cancel. To make the
method work here, you could synchronously switch the input signal between
two perfectly linear stages. My point was that a full-wave rectified
signal contains only even order harmonics.

In the real world, as Stray Dog pointed out, ALL amplifier stages are nonlinear to some degree. The reason that Class AB and B amplifiers are considered linear RF amplifiers is that the tuned circuit on the output supplies supplies the "missing half" of the waveform. Without the tuned circuit, harmonics of the 2nd, 4th, 6th, etc. order as well as the fundamental are present. Odd order harmonics are only found if the gain is nonlinear for positive input signals. The tuned output stage passes the fundamental and suppresses the harmonics.

Thanks for pointing this out, Bill.

73, Barry WA4VZQ

## 2184. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 14:16:29 UTC
From: Telstar Electronics <briangriffey@sbcglobal.net>
Message-ID: <d2b47540-3d78-46bf-8a1f-e981ad77d300@i18g2000prf.googlegroups.com>
Source record: 3771

On Dec 14, 10:27 pm, "NoSPAM" <unkn...@nospam.org> wrote:
> >>  Actually you do not need any nonlinearity to make a doubler
> >> (quadrupler, etc.).

You mean to tell me that you take a clean sine wave... pass it
through... say a single-ended class A amp... and you can put a tank on
the output of that amplifier... and tune for a harmonic? You will get
nothing.

# 2185. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 16:49:27 UTC
From: Denny <k8do@mailblocks.com>
Message-ID: <e02f2c41-57c2-4120-b031-add44d224d8d@s9g2000prm.googlegroups.com>
Source record: 3772

We cut .090" aluminum sheets all the time... We do it on a 10" table saw with a 6", fine tooth blade, high speed steel, no off set in the teeth, feed it sloooow, and wear ear muffs......

denny - k8do

## 2186. ionized air cooler

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 16:56:56 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <ae076a63-47ea-4d56-a8fc-21431790b6ac@e18g2000vbe.googlegroups.com>
Source record: 3773

Ima seriously looking at cooling with negative ions, I've seen an article once before in Popular Electronics or Radio Electronics.

But on further researching I found this: "If a gentle stream of charged air is directed at a red-hot metal object, the stream of air will cool the object as if its velocity were around 50MPH! Charged air causes anomalous cooling of hot objects and anomalous heating of cold objects.

at this site: http://amasci.com/freenrg/iontest.html

So then I'm using a bug zapper xformer, at about 5,000 VDC. At 10,000VDC it will blow out the flame of my BIC lighter. At these potentials how should one measure the temp?

Except for that High Voltage sizzle it's pretty darn quite.

73
n8zu

# 2187. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 18:11:37 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <70e99ceb-4497-4cd3-9e2b-6bd633b4dbc8@p2g2000prf.googlegroups.com>
Source record: 3774

On Dec 14, 4:27 pm, JIMMIE <jimmi...@gmail.com> wrote:
> I have some door kick panels, some brass and a couple of Al ones. I
> have used these before to make enclosures but in the past I always cut
> them with a reciprocating saw then did a lot of filing to get the
> edges straight and pretty. I was wondering if I could cut these using
> my table saw. The motor is sealed so I don't have to worry about
> getting metal shavings in it. Anyone here ever done this before. If so
> what kind of blade did you use? Were there any special techniques you
> applied?

Fine-toothed circular saw blade made for cutting metal works wonders
on not just aluminum and brass but also many hard plastics.

You will probably not find the optimal blade at your local home depot
or hardware store. Check out mcmaster.com

If you can clamp the material or build a custom fence to hold down
thin material you will greatly reduce the vibration and noise.

Ear and eye protection is a must.

Believe it or not, I have seen aluminum machining done with a 2 or
2.25 HP electric router on long (20, 30 foot) bars for cutting slots
etc.

Tim.

## 2188. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 19:27:08 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812151908400.23962@sdf.lonestar.org>
Source record: 3775

On Sun, 14 Dec 2008, NoSPAM wrote:

> Date: Sun, 14 Dec 2008 23:27:11 -0500
> From: NoSPAM <unknown@nospam.org>
> Newsgroups: rec.radio.amateur.homebrew
> Followup-To: rec.radio.amateur.homebrew
> Subject: Re: Doubling
>
> "Bill Janssen" <billj@ieee.org> wrote in message
> news:nSj1l.8928$5P1.2861@newsfe13.iad...
>> NoSPAM wrote:
>>> "Telstar Electronics" <briangriffey@sbcglobal.net
>>> <mailto:briangriffey@sbcglobal.net>> wrote in message
>>> news:53d62848-294c-4264-80f3-68e772536ce4@i24g2000prf.googlegroups.com...
>>> >On Nov 22, 8:43 pm, Stray Dog <sdog2...@sdf.lonestar.org
>>> <mailto:sdog2...@sdf.lonestar.org>> wrote:
>>> ?> Despite what at least one other person responding to this said, I can
>>> rest
>>> >> assure you that if you run a doubler/multiplier stage even in a >>
>>> linear
>>> >> mode, AND if you tune the output of that stage to the multiple
>>> harmonic,
>>> >> you will definitely get output at that harmonic frequency which is
>>> >> stronger than the input drive voltage.
>>> >
>>> >Huh? No way... you MUST have non-linearities to make a doubler.
>>> Actually you do not need any nonlinearity to make a doubler (quadrupler,
>>> etc.).
>>> Assume you have two Class B (or AB) stages that are driven in push-pull.
>>> The outputs are connected in parallel. And to make things even more
>>> linear, let each stage have a resistive load. Each stage will produce a
>>> linearly amplified (but inverted) version of the input signal FOR THE
>>> POSITIVE HALF of the driving waveform only. Being driven 180 degrees out
>>> of phase with the input signal, the second stage will produce a linearly
>>> amplified but (again inverted) version of the input signal FOR THE
>>> NEGATIVE HALF of the driving waveform. Both outputs will have a DC offset
>>> of the plate (collector, drain) voltage.
>> Class B or even Class AB in the circuit you described are non-linear. Try
>> that circuit
>> with Class A biasing.
>>
>> Bill K7NOM
>
>

> All that is really required is that the active devices have a different gain
> with positive input signals than with negative input signals. This is easily
> achieved with Class B and Class AB stages. As long as both stages are
> identical the fundamental and odd order harmonics will cancel. You are
> correct that with two Class A stages where the gain is identical for either
> polarity of input, the output signal will perfectly cancel. To make the
> method work here, you could synchronously switch the input signal between two
> perfectly linear stages. My point was that a full-wave rectified signal
> contains only even order harmonics.
>
> In the real world, as Stray Dog pointed out, ALL amplifier stages are
> nonlinear to some degree. The reason that Class AB and B amplifiers are
> considered linear RF amplifiers is that the tuned circuit on the output
> supplies supplies the "missing half" of the waveform. Without the tuned
> circuit, harmonics of the 2nd, 4th, 6th, etc. order as well as the
> fundamental are present. Odd order harmonics are only found if the gain is
> nonlinear for positive input signals. The tuned output stage passes the
> fundamental and suppresses the harmonics.
>
> Thanks for pointing this out, Bill.
>
> 73, Barry WA4VZQ
>

I'll just add a footnote. When I actually built a few "buffer" amplifiers (tube jobs, 12BY7s, 6AG7s, etc), and for the hell of it, hooked up my scope (an old Tektronix solid state scope with one microsecond/div timebase, max) and actually looked at the sine wave (it looked 'nice' by the way) and then tuned the air variable through both the fundamental or the second harmonic (and I'm talking about 2-3 mHz signal source), I was amazed to be able to easily see the extra "peaks" come out of the "valleys" of the fundamental and I'm running these tubes at zero bias, low plate voltage, too. Look in the tube manuals for any class C tube and they talk about -50 to -70 v, grid negative wrt cathode. Class B and below talk about negative bias much lower but still pretty negative.

Like I said, I was surprised. This _should_ be discussed in the ARRL handbooks (maybe it is, but I couldn't find it [maybe I didn't look hard enough?]) and it would be worth 1-2 pages to show everyone what these signals have in them.

Here is another goodie (true story). R-390 local oscillator (runs 2.4 to 3.4 mHz, single 6BA6 tube). Had it set to about 3 mHz and looking at that "nice" (I have no harmonic meter to measure distortion) sine wave on the scope, and I "loaded down" the oscillator output lead with a tuned circuit and tuned that circuit to about 6 mHz. Guess what? Got double the number of peaks on the scope, just as with the linear amplifier. All calculate out on peaks vs time base divisions. So? Does anyone want to suggest that having the output LC circuit of an LC free-running oscillator tuned to double the frequency of the LC circuit is making it "oscillate" on its second overtone? ;-)

Yeah, I checked resonant frequencies with a GDO on all this stuff, too. I'm not making any of this up.

For the record, I also have an old Knight Kit RF oscillator (100Kc to 400 mHz on 3rd harmonic) and put that into my scope and the waveform looks like crap (but you can pick up the signal on a SW receiver set to where the scale matches the frequency of the oscillator). And, the shape of the crap changes from one end of the band to the other. Also have an old HP audio oscillator (high quality stuff) and it puts out a _very_ 'nice' sine wave no matter where in the range you set the dial (one Hz to 200 kHz).

73 all,

# 2189. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 19:31:09 UTC
From: None <monk36098674@yahoo.com>
Message-ID: <c6790e14-da87-4846-818a-ea67ef9eb7a5@l33g2000pri.googlegroups.com>
Source record: 3776

On Dec 14, 1:27 pm, JIMMIE <jimmi...@gmail.com> wrote:
> I have some door kick panels, some brass and a couple of Al ones. I
> have used these before to make enclosures but in the past I always cut
> them with a reciprocating saw then did a lot of filing to get the
> edges straight and pretty. I was wondering if I could cut these using
> my table saw. The motor is sealed so I don't have to worry about
> getting metal shavings in it. Anyone here ever done this before. If so
> what kind of blade did you use? Were there any special techniques you
> applied?
>
> It seems like this would save me a lot of finish work if I could do
> it.
>
> Jimmie

For thinner panels I use a large paper cutter that I reinforced the
hinge mount. This also cuts larger circuit board. For smaller circuit
board I use a tile cutter I picked up at a garage sale for a buck.

Wayne kd7rur

# 2190. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 19:45:31 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <zty1l.1382$fv3.804@newsfe06.iad>
Source record: 3777

"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
news:d2b47540-3d78-46bf-8a1f-e981ad77d300@i18g2000prf.googlegroups.com...
> You mean to tell me that you take a clean sine wave... pass it
>through... say a single-ended class A amp... and you can put a tank on
>the output of that amplifier... and tune for a harmonic? You will get
>nothing.

Class A means that plate current is flowing throughout the entire cycle of the input wave with the tube operated between cutoff and saturation. It says nothing about the linearity of the tube's transconductance (plate current as a function of grid voltage). With real devices, the transconductance curve is ALWAYS nonlinear to some degree, producing distortion (and harmonics). As you decrease the drive to a single-ended Class A amplifier, you are working on a smaller and smaller portion portion of the transconductance curve which decreases distortion. In the limit where only an infinitesimal part of the transconductance curve is used, you will get no distortion and no harmonics. Of course, in this situation the tube produces NO output.while drawing current from the power supply.

The scheme that I was talking about, known as a push-push doubler, generally uses the tubes operated in Class B although AB operation will work too, but it produces less harmonics. The real advantage of a push-push doubler is that odd order harmonics and the fundamental cancel out, making the resultant waveform easier to filter.

73, Barry WA4VZQ

# 2191. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 19:46:23 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812151929510.23962@sdf.lonestar.org>
Source record: 3778

On Mon, 15 Dec 2008, Telstar Electronics wrote:

> Date: Mon, 15 Dec 2008 06:16:29 -0800 (PST)
> From: Telstar Electronics <briangriffey@sbcglobal.net>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: Doubling
>
> On Dec 14, 10:27 pm, "NoSPAM" <unkn...@nospam.org> wrote:
>>>>  Actually you do not need any nonlinearity to make a doubler
>>>> (quadrupler, etc.).
>
> You mean to tell me that you take a clean sine wave...

You might want to consider qualifying your thinking on this by setting a specification for harmonic distortion (in other words, you might need to consider how much of that "clean sine wave" signal has other components in it, including non-harmonic componentes)

pass it
> through... say a single-ended class A amp...

You might also want to consider, here, too, how much harmonic distortion THAT class A amplifier also causes which makes a contribution to the output.

and you can put a tank on
> the output of that amplifier... and tune for a harmonic? You will get
> nothing.

You might even more also want to consider that any tuned circuit will pass energy not at the resonance of that tuned circuit.

You would probably contribute to your own enlightenment if you actually did some real experiments on this. It does not take long to do.

Back when I was an undergraduate student with major in physics (BS, 1966), I worked in a Mossbauer Effect spectrometer lab and we built most of our equipment (dual delay line pulse amplifiers, regulated DC power supplies, repairing survey meters, etc) my boss had me build a waveform converter that used a network of resistors and diodss to convert a sawtooth waveform to sine wave and he was doing this because the book he got the circuit from said that there would be less than 1% harmonic distortion and he was interested in that specification for the spectrometer drives and all of our commercial high quality signal generators were worse in that specification, particulary at the very low frequencies we ran the drives at (less than one cycle per second).

So, you have to define what you mean by "clean sine wave." But, I'll also say that, no, you will not get nothing if you tune to the second harmonic and have a linear amplifier (unless, maybe, you have a _perfect_ sine wave and a _perfect_ linear amplifier [the rest of you guys might want to comment on this <yeah, I know about Fourier analysis, too>]).

# 2192. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 22:29:28 UTC
From: Just Me <demo@crat.com>
Message-ID: <3fmdk4hjg58t5oihhrtlad4nq21uvl0h1c@4ax.com>
Source record: 3779

On Sun, 14 Dec 2008 13:27:36 -0800 (PST), JIMMIE <jimmie68@gmail.com>
wrote:

>I have some door kick panels, some brass and a couple of Al ones. I
>have used these before to make enclosures but in the past I always cut
>them with a reciprocating saw then did a lot of filing to get the
>edges straight and pretty. I was wondering if I could cut these using
>my table saw. The motor is sealed so I don't have to worry about
>getting metal shavings in it. Anyone here ever done this before. If so
>what kind of blade did you use? Were there any special techniques you
>applied?
>
>It seems like this would save me a lot of finish work if I could do
>it.
>
>Jimmie

I have used composition blades for aluminum/steel/copper sheet, angle,
tubing and rods with good luck.

Wear eye protection and hearing protection!

The cut edges will be sharp, file or sand until smooth.

# 2193. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 22:53:21 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <EdB1l.16656$uS1.14886@newsfe19.iad>
Source record: 3780

I bought a non-ferrous metal blade for my power miter saw - works great on
antenna aluminum projects - even built a special jig for cutting vertical
"slits" in aluminum tubing.

--
-larry
K8UT
"JIMMIE" <jimmie68@gmail.com> wrote in message
news:2e974a98-78bf-4310-9661-826948e0fe2c@17g2000vbf.googlegroups.com...
>I have some door kick panels, some brass and a couple of Al ones. I
> have used these before to make enclosures but in the past I always cut
> them with a reciprocating saw then did a lot of filing to get the
> edges straight and pretty. I was wondering if I could cut these using
> my table saw. The motor is sealed so I don't have to worry about
> getting metal shavings in it. Anyone here ever done this before. If so
> what kind of blade did you use? Were there any special techniques you
> applied?
>
> It seems like this would save me a lot of finish work if I could do
> it.
>
> Jimmie

# 2194. Re: Reference oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-15 23:16:46 UTC
From: "Ebbe (7000)" <"es44 pc">
Message-ID: <4946e567$0$90274$14726298@news.sunsite.dk>
Source record: 3781

K7ITM wrote:
|| Hi all,
||
|| Over the past few years, I've had the opportunity to save some decent
|| reference oscillators from being thrown away, by removing them from
|| scrap boards. They're typically good stability (temp. compensated),
|| and reasonably low phase noise. I have 10MHz, 20MHz and 100MHz, and
|| a couple others. Some have a voltage control input. All are 5V
|| (but I know some will work down to 3.3V), logic output (but "logic"
|| means PECL for the 100MHz ones). I'd be happy to send one or two to
|| folk who have a specific reasonably immediate need for such a beast.
|| If you're interested, drop me an email to let me know exactly what
|| you're looking for and why you want it. I'll let you know if you
|| made the cutoff. I may ask for shipping costs if I can't figure out
|| how to send them cheaply enough but packaged safely. The
|| oscillators will be free to good homes, though.
||
|| Cheers,
|| Tom

Really generous offer, unfortunately i'm too far away to take advantage of
your nice gesture :-(
Funny thing, it feels like i live in a place where things like that is
impossible to get near, (unless i buy via the internet, and at a price that
makes it unattractive to me).

Have a merry Christmas and a happy new year.
oz1esc, Ebbe

# 2195. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 03:08:54 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <be4b2c12-e533-4a39-8a69-26825ea54560@v31g2000vbb.googlegroups.com>
Source record: 3782

On Dec 15, 5:53 pm, "Larry Gauthier \(K8UT\)" <MyCalls...@ARRL.NET>
wrote:
> I bought a non-ferrous metal blade for my power miter saw - works great on
> antenna aluminum projects - even built a special jig for cutting vertical
> "slits" in aluminum tubing.
>
> --
> -larry
> K8UT"JIMMIE" <jimmi...@gmail.com> wrote in message
>
> news:2e974a98-78bf-4310-9661-826948e0fe2c@17g2000vbf.googlegroups.com...
>
>
>
> >I have some door kick panels, some brass and a couple of Al ones. I
> > have used these before to make enclosures but in the past I always cut
> > them with a reciprocating saw then did a lot of filing to get the
> > edges straight and pretty. I was wondering if I could cut these using
> > my table saw. The motor is sealed so I don't have to worry about
> > getting metal shavings in it. Anyone here ever done this before. If so
> > what kind of blade did you use? Were there any special techniques you
> > applied?
>
> > It seems like this would save me a lot of finish work if I could do
> > it.
>
> > Jimmie- Hide quoted text -
>
> - Show quoted text -

Well, I tried using a carbide tipped blade to cut some thick aluminum
plate and will never do that again. There is an extreme tendency
toward kick back. The same blade performed well for cutting Al tubing
in my radial arm saw. I think the problem is mostly becase of the way
the angle at which the blade is ground. Perhaps installing the blade
backwards may solve this problem.

Jimmie

# 2196. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 04:29:35 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <N8G1l.9048$5P1.6421@newsfe13.iad>
Source record: 3783

"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
news:d2b47540-3d78-46bf-8a1f-e981ad77d300@i18g2000prf.googlegroups.com...

> You mean to tell me that you take a clean sine wave... pass it
> through... say a single-ended class A amp... and you can put a tank on
> the output of that amplifier... and tune for a harmonic? You will get
> nothing.

Of course you will. No active device is perfect.

I decided to illustrate the fact that a single ended triode operated in Class A can produce harmonics. For a tube, I used a 6C4 (1/2 of a 12AU7) operated with 300 volts on the plate, a grid bias voltage of -7 volts, driven with a pure sine wave of 14 volts peak-to-peak. The high driving voltage was chosen to illustrate my earlier points, but the stage _IS_ operated Class A with the plate current between cutoff and saturation.

Since the "rec"groups are not supposed to have binaries in them, I placed the graphics as PDF attachments to a post entitled "Harmonics generated by a Class A stage" in the "alt.binaries.ham-radio" newsgroup. If anyone wishes to see these curves and their newsgroup provider does not provide this group, I apologize. I believe Google Groups may not provide binaries, so I suggest getting a real newsreader and a good newsfeed.

The first graph is entitled "Transconductance.pdf" and it shows the plate current as a function of the grid voltage. This data was obtained directly from the General Electric datasheet, ET-T1604 dated March, 1960. Since Excel stinks when plotting and doing calculations with data that is not best expressed in a bar chart, I used an evaluation copy of PSIPlot from Poly Software International (http://www.polysoftware,com) to generate the plots. {Real scientists and engineers never use a bar chart except when making presentations to brain challenged management!} :-)

The driving waveform and the resultant plate current waveform are shown in the graph entitled "Waveforms.pdf". The obvious flattening is due to cutoff being approached at the crest of the driving waveform. After all, the transconductance curve is not perfectly a straight line.

Finally, the spectrum of current waveform is plotted in the graph called "Spectrum.pdf". The spectrum has been normalized with respect to the DC output. The scale of the X-axis is slightly off but it was not worth my time correcting it. The fundamental is about 60 to 70 percent of the DC output, and the second harmonic is about 40 percent of the DC output. All higher harmonic are less than one percent of the DC output except the fifth. Higher harmonics are still greater than one tenth of a percent of the DC up to the _13th_ harmonic. Harmonics beyond the 14th are still

readily measured.

In conclusion, even single ended Class A amplifiers generate harmonics. If a lower driving voltage were used, the amplitudes of the harmonics would be reduced, but the fundamental would also be reduced. Please follow-up to the "rec.radio.amateur.homebrew" newsgroup. Golden-eared audiophools will be ignored.

73, Dr. Barry L. Ornitz WA4VZQ

# 2197. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 07:47:22 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <ommek4h6dubdsklehatlb7ga60kqlnv6um@4ax.com>
Source record: 3784

On Mon, 15 Dec 2008 23:29:35 -0500, "NoSPAM" <unknown@nospam.org>
wrote:

>"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
>news:d2b47540-3d78-46bf-8a1f-e981ad77d300@i18g2000prf.googlegroups.com...
>
>> You mean to tell me that you take a clean sine wave... pass it
>> through... say a single-ended class A amp... and you can put a tank on
>> the output of that amplifier... and tune for a harmonic? You will get
>> nothing.
>
>Of course you will. No active device is perfect.
>
>I decided to illustrate the fact that a single ended triode operated in
>Class A can produce harmonics. For a tube, I used a 6C4 (1/2 of a 12AU7)
>operated with 300 volts on the plate, a grid bias voltage of -7 volts,
>driven with a pure sine wave of 14 volts peak-to-peak. The high driving
>voltage was chosen to illustrate my earlier points, but the stage _IS_
>operated Class A with the plate current between cutoff and saturation.

Did you bypass the cathode resistor or not ?

All active elements are more or less nonlinear, so if you need more or
less linear amplification, you need to use feedback/feedforward.

A non-bypassed cathode/emitter resistor will greatly improve the
linearity of a single stage.

Paul OH3LWR

## 2198. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 08:12:56 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <mVHHgPEIM2RJFADl@ifwtech.co.uk>
Source record: 3785

Larry Gauthier (K8UT) wrote:
>I bought a non-ferrous metal blade for my power miter saw - works great
>on antenna aluminum projects - even built a special jig for cutting
>vertical "slits" in aluminum tubing.

At last - someone using the right tool for the job! Circular saw blades for non-ferrous metal cutting are specially designed to reduce the dangers of jammed blades and flying metal.

As well as having many small teeth, the front cutting edge of each tooth slopes slightly backward to avoid digging into the soft metal (known as "negative rake"). Also the top profile of each tooth is designed to remove the metal as small chips.

Even negative rake blades are not jam-proof, especially when cutting through tubing. Half-way through the cut, it becomes very easy to hook a tooth into the wall of the tube, and BANG - it jams. Larry is very right to be using a jig to hold everything very firmly.

--

73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

## 2199. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 11:46:54 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <ZyM1I.20458$R43.19431@newsfe08.iad>
Source record: 3786

Well <blush> let's not heap too much praise on my solution... someone else told me that this was the best/safest way to go. I clamp everything down before lowering the blade onto it.

One other trick I use to prevent a bunch of metal debris from flying around: my miter saw came with a cheap little "sawdust collector bag" that only catches about 50% of the debris. I remove that bag and attach my shop vac hose to the outlet from the saw. This works great and results in very little debris (I still wear safety glasses and work gloves, of course).
--
-larry
K8UT
"Ian White GM3SEK" <gm3sek@ifwtech.co.uk> wrote in message
news:mVHHgPEIM2RJFADl@ifwtech.co.uk...
> Larry Gauthier (K8UT) wrote:
>>I bought a non-ferrous metal blade for my power miter saw - works great on
>>antenna aluminum projects - even built a special jig for cutting vertical
>>"slits" in aluminum tubing.
>
> At last - someone using the right tool for the job! Circular saw blades
> for non-ferrous metal cutting are specially designed to reduce the dangers
> of jammed blades and flying metal.
>
> As well as having many small teeth, the front cutting edge of each tooth
> slopes slightly backward to avoid digging into the soft metal (known as
> "negative rake"). Also the top profile of each tooth is designed to remove
> the metal as small chips.
>
> Even negative rake blades are not jam-proof, especially when cutting
> through tubing. Half-way through the cut, it becomes very easy to hook a
> tooth into the wall of the tube, and BANG - it jams. Larry is very right
> to be using a jig to hold everything very firmly.
>
>
> --
>
> 73 from Ian GM3SEK 'In Practice' columnist for RadCom (RSGB)
> http://www.ifwtech.co.uk/g3sek

# 2200. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 14:28:10 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <f286a892-c26b-4e87-b474-cfd5318669d2@z28g2000prd.googlegroups.com>
Source record: 3787

On Dec 16, 3:12 am, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> Larry Gauthier (K8UT) wrote:
> >I bought a non-ferrous metal blade for my power miter saw - works great
> >on antenna aluminum projects - even built a special jig for cutting
> >vertical "slits" in aluminum tubing.
>
> At last - someone using the right tool for the job! Circular saw blades
> for non-ferrous metal cutting are specially designed to reduce the
> dangers of jammed blades and flying metal.
>
> As well as having many small teeth, the front cutting edge of each tooth
> slopes slightly backward to avoid digging into the soft metal (known as
> "negative rake"). Also the top profile of each tooth is designed to
> remove the metal as small chips.
>
> Even negative rake blades are not jam-proof, especially when cutting
> through tubing. Half-way through the cut, it becomes very easy to hook a
> tooth into the wall of the tube, and BANG - it jams. Larry is very right
> to be using a jig to hold everything very firmly.
>
> --
>
> 73 from Ian GM3SEK 'In Practice' columnist for RadCom
(RSGB)http://www.ifwtech.co.uk/g3sek

I also believe in the right tool for the right job too but when I saw the $80 USD price tag on the right blade using the wrong one became more appealing. Also I had read a magazine article on using regular carbide tipped tools meant for wood to cut non ferrous metal. The article is WRONG, Its dangerous. I finished cutting my panels with a jig saw. I lowered the table on drill press to make it flush with my table saw to make use of it's fench as a guide and installed a mill in the press. I used the mill to plane the edges of raw cuts. Unless I ever find the occasion to do small production run this will be the way I do it from now on.

Jimmie

# 2201. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 14:58:06 UTC
From: Rick <ricknj10@hotmail.com>
Message-ID: <4947c1ff$0$20283$607ed4bc@cv.net>
Source record: 3788

A few years ago someone gave me a box of tube sockets and some 5763s. I always wondered if they were any good. So I built up a sloppy little oscillator, running on 7038 and 22 out of 23 of them oscillated. It takes 17 seconds for a filament to warm up and the circuit to start putting out power.
Ok so what next? I notice in the tube manual, ARRL handbook 1966, that it has 13 watts plate dissipation. Wow that seems like a lot for a little 9 pin tube. So I built another stage next to the oscillator and a little pi network output and drove the heck out of it. Only got 3 watts. Then double checked the voltages since I was running on a variac and lo and behold I only had 5 volts on the filament so cranked her up where she should be and now getting 9 watts into 50 ohms.
Then checked the great W8JI website and see where he put some shaping into his DX60 to clean up the clicks so I looked at my output with a scope with my keyer banging away at the thing and ye Gads, a square wave. So now working on values of a grid block keyer circuit to round off the edges. Fun stuff.
Added a socket for an 807. Wow, got plenty of drive !! 55 watts out with 600 volts on the plate. 2nd harmonic 45 db down, not too bad. Total money expended to date - $zero.
Anyone like to do something similar? If you need a 5763 and socket just let me know. All I ask is you to really use it, not just throw it in the drawer for some day in the future.
Oh by the way. This is just posted to homebrew, don't need to cross post it to the other newsgroups, too much of that going on. Pick the group that it belongs in and they will find it if they are interested.
73,
Rick K2XT

# 2202. Re: ionized air cooler

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 19:12:39 UTC
From: Yukio YANO <yano@shaw.ca>
Message-ID: <I4T1I.182$Us1.68@newsfe05.iad>
Source record: 3789

raypsi wrote:
> At these
> potentials how should one measure the temp?
>
> Except for that High Voltage sizzle it's pretty darn quite.
>
> 73
> n8zu
I just spotted a local xmas advert, for a Infra-red Thermometer for
~$25.00
Just the ticket for measuring these ticklish situations !
At that price I am tempted !

Yukio YANO

## 2203. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 19:16:29 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812161916220.14267@sdf.lonestar.org>
Source record: 3790

On Tue, 16 Dec 2008, Paul Keinanen wrote:

> Date: Tue, 16 Dec 2008 09:47:22 +0200
> From: Paul Keinanen <keinanen@sci.fi>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: Doubling
>
> On Mon, 15 Dec 2008 23:29:35 -0500, "NoSPAM" <unknown@nospam.org>
> wrote:
>
>> "Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
>> news:d2b47540-3d78-46bf-8a1f-e981ad77d300@i18g2000prf.googlegroups.com...
>>
>>> You mean to tell me that you take a clean sine wave... pass it
>>> through... say a single-ended class A amp... and you can put a tank on
>>> the output of that amplifier... and tune for a harmonic? You will get
>>> nothing.
>>
>> Of course you will. No active device is perfect.
>>
>> I decided to illustrate the fact that a single ended triode operated in
>> Class A can produce harmonics. For a tube, I used a 6C4 (1/2 of a 12AU7)
>> operated with 300 volts on the plate, a grid bias voltage of -7 volts,
>> driven with a pure sine wave of 14 volts peak-to-peak. The high driving
>> voltage was chosen to illustrate my earlier points, but the stage _IS_
>> operated Class A with the plate current between cutoff and saturation.
>
> Did you bypass the cathode resistor or not ?

I did the same experiment that he did (6C4) only ran the cathod at
chassis, and grid through an RF choke, and 100 vDC on plate, and drove at
about 1/2-1 volt and that is zero bias, no need for cathode cap bypass, and
I got gain and second harmonic.

> All active elements are more or less nonlinear, so if you need more or
> less linear amplification, you need to use feedback/feedforward.
>
> A non-bypassed cathode/emitter resistor will greatly improve the
> linearity of a single stage.

I'm still waiting for any "expert" comments from anyone who would care to
speculate on the contributions, from oscillator harmonic content vs
contribution from harmonic distortion in the amplifier.

> Paul OH3LWR
>

>

# 2204. Re: ionized air cooler

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-16 23:08:05 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <41d85b56-7c85-44c5-af99-b33a44528c59@s16g2000vbp.googlegroups.com>
Source record: 3791

> I just spotted a local xmas advert, for a Infra-red Thermometer for
> ~$25.00
> Just the ticket for measuring these ticklish situations !
> At that price I am tempted !
>
> Yukio YANO

Hey OM

your right of coarse I seen 'em at harbor freight tools also. I just
rememebered the one I was trying to think of is ultra sonic sound used
to measure tempurature. Something I would take a piezo transducer or
tweeter and detect the temperature that way.

73 OM
n8zu

# 2205. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 00:33:53 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <ONX1l.20868$R43.7319@newsfe08.iad>
Source record: 3792

"Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
news:a92ca348-3dde-4261-b01b-f694c2a21c83@z1g2000yqn.googlegroups.com...
> Nonsense... please read the definition section at
> http://minicircuits.com/pages/pdfs/doub9-2.pdf

You are grasping at straws trying to defend your beliefs. Their definition only applies to their products. You should have read the entire article. If you consider the single discontinuity of an ideal diode at the origin as nonlinear, then you are correct. In practice, two Class AB or B amplifiers, operated over their most linear region (each individually producing harmonics and intermodulation over 40 dB down from the fundamental), can be used in a push-push configuration to produce even order harmonics. I believe "Stray Dog" and I both have shown that single ended Class A amplifiers DO produce harmonics.

The Mini Circuits "doubler" is, I believe, essentially a full wave rectifier using Schottky diodes. If the diodes were ideal, i.e. had no highly non-linear region at low voltages, there would be no fundamental output or odd order harmonics. From my earlier discussion of full wave rectification, perfect diodes would produce the fourth harmonic 14 dB lower than the second harmonic, and the sixth harmonic slightly over 7 dB down from the fourth. The Minicircuits device produces at its output the fundamental and odd order harmonics in addition to the desired even order harmonics. It also requires a drive level of between 0 and 20 dBm. Too low a drive and the doubling action disappears; too high a drive and the amplitude of the higher harmonics increases (until the device burns out).

Some further research into the push-push doubler reveals that two sharp cutoff pentodes would do a better job than triodes for this application. Also junction field effect transistors follow square law characteristics over a fairly wide range making them ideal in frequency doubler operation too. It is also possible to nearly achieve ideal diode behavior with the use of very high gain amplifiers with feedback through the diode. See the following Intersil ap-note for details:
http://www.intersil.com/data/an/an1114.pdf.

My post of the graphs has not appeared on the "alt.binaries.ham-radio" Usenet newsgroup, even on my nntp server which still insists that the newsgroup exists. I'll try again using "alt.binaries.radio.misc" this time. My thanks go to "Stray Dog" for his efforts in also experimenting with a single ended 6C4 triode.

73, Dr. Barry L. Ornitz WA4VZQ

# 2206. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 01:05:05 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <fe555d4f-52b2-4fe3-80a1-2a066f379cef@v42g2000yqv.googlegroups.com>
Source record: 3793

Hey OM

I'd give my right kidney for a water jet cutter. 60,000 psi water out of a saphire jet nozzle with a 10 mil opening feed by a high pressure 1/8 inch tubing. Uses only 1.2 gpm of water. Cuts even titatium like a knife thru butter.

73 OM

n8zu

# 2207. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 01:43:39 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <e8e8e871-64c2-4a31-97ba-27925d3264e8@f18g2000vbf.googlegroups.com>
Source record: 3794

On Dec 16, 8:05 pm, raypsi <RBorow...@gmail.com> wrote:
> Hey OM
>
> I'd give my right kidney for a water jet cutter. 60,000 psi water  out
> of a saphire jet nozzle with a 10 mil opening feed by a high pressure
> 1/8 inch tubing. Uses only 1.2 gpm of water. Cuts even titatium like a
> knife thru butter.
>
> 73 OM
>
> n8zu

My cousin runs one or did. He is/was a civilian employee at a naval base, he may be retired now.. I think he spent more time cutting parts out for custom cars than anything else. I remember the first time I saw the thing was in the early 80s and the computer that ran it took up 3 or 4 rack cabinets and data for the pattern was put in on mylar punch tape. The last time I saw it there were just a couple of PCs. He has even used the thing to cut automotive glass. Slices through it like the proverbial butter. There were rumors that Santa may bring me a plasma tourch set this year but I don't think its going to happen. He already remodeled my bathroom.

Jimmie

Jimmie

# 2208. Re: Reference oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 04:39:27 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <5032bd78-4b6c-4067-b5d0-dc05be22b472@r15g2000prh.googlegroups.com>
Source record: 3795

On Dec 15, 3:16 pm, "Ebbe \(7000\)" <es44(snabela)pc[punktum]dk>
wrote:
> K7ITM wrote:
>
> || Hi all,
> ||
> || Over the past few years, I've had the opportunity to save some decent
> || reference oscillators from being thrown away, by removing them from
> || scrap boards.  They're typically good stability (temp. compensated),
> || and reasonably low phase noise.  I have 10MHz, 20MHz and 100MHz, and
> || a couple others.  Some have a voltage control input.  All are 5V
> || (but I know some will work down to 3.3V), logic output (but "logic"
> || means PECL for the 100MHz ones). I'd be happy to send one or two to
> || folk who have a specific reasonably immediate need for such a beast.
> || If you're interested, drop me an email to let me know exactly what
> || you're looking for and why you want it.  I'll let you know if you
> || made the cutoff.  I may ask for shipping costs if I can't figure out
> || how to send them cheaply enough but packaged safely.  The
> || oscillators will be free to good homes, though.
> ||
> || Cheers,
> || Tom
>
> Really generous offer, unfortunately i'm too far away to take advantage of
> your nice gesture :-(
> Funny thing, it feels like i live in a place where things like that is
> impossible to get near, (unless i buy via the internet, and at a price that
> makes it unattractive to me).
>
> Have a merry Christmas and a happy new year.
> oz1esc, Ebbe

Hmmm. Do you live in some place that does not have mail service? I
don't recall putting any particular geographical boundaries on the
offer.

Cheers,
Tom

# 2209. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 04:59:27 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812170459170.2678@sdf.lonestar.org>
Source record: 3796

See minor point at end....

On Tue, 16 Dec 2008, NoSPAM wrote:

> Date: Tue, 16 Dec 2008 19:33:53 -0500
> From: NoSPAM <unknown@nospam.org>
> Newsgroups: rec.radio.amateur.homebrew
> Followup-To: rec.radio.amateur.homebrew
> Subject: Re: Doubling
>
> "Telstar Electronics" <briangriffey@sbcglobal.net> wrote in message
> news:a92ca348-3dde-4261-b01b-f694c2a21c83@z1g2000yqn.googlegroups.com...
>> Nonsense... please read the definition section at
>> http://minicircuits.com/pages/pdfs/doub9-2.pdf
>
> You are grasping at straws trying to defend your beliefs. Their definition
> only applies to their products. You should have read the entire article. If
> you consider the single discontinuity of an ideal diode at the origin as
> nonlinear, then you are correct. In practice, two Class AB or B amplifiers,
> operated over their most linear region (each individually producing harmonics
> and intermodulation over 40 dB down from the fundamental), can be used in a
> push-push configuration to produce even order harmonics. I believe "Stray
> Dog" and I both have shown that single ended Class A amplifiers DO produce
> harmonics.
>
> The Mini Circuits "doubler" is, I believe, essentially a full wave rectifier
> using Schottky diodes. If the diodes were ideal, i.e. had no highly
> non-linear region at low voltages, there would be no fundamental output or
> odd order harmonics. From my earlier discussion of full wave rectification,
> perfect diodes would produce the fourth harmonic 14 dB lower than the second
> harmonic, and the sixth harmonic slightly over 7 dB down from the fourth.
> The Minicircuits device produces at its output the fundamental and odd order
> harmonics in addition to the desired even order harmonics. It also requires
> a drive level of between 0 and 20 dBm. Too low a drive and the doubling
> action disappears; too high a drive and the amplitude of the higher harmonics
> increases (until the device burns out).
>
> Some further research into the push-push doubler reveals that two sharp
> cutoff pentodes would do a better job than triodes for this application. Also
> junction field effect transistors follow square law characteristics over a
> fairly wide range making them ideal in frequency doubler operation too. It
> is also possible to nearly achieve ideal diode behavior with the use of very
> high gain amplifiers with feedback through the diode. See the following
> Intersil ap-note for details: http://www.intersil.com/data/an/an1114.pdf.
>

> My post of the graphs has not appeared on the "alt.binaries.ham-radio" Usenet
> newsgroup, even on my nntp server which still insists that the newsgroup
> exists. I'll try again using "alt.binaries.radio.misc" this time.

I learned many years ago that even non-binary newsgroups _can_ carry
attached files (in any format), but then later learned that ISPs can
configure their newsservers in ways that can prevent you from making a
post with an attached file. I discovered that when a post I tried to make
with a new ISP gave me an error message. It is possible that you have an
ISP that somehow prevents either/or the body and/or the attached file from
being posted either dependently or independently from each other. And,
tech support people don't understand this, and sometimes even the geeky
whips who are sysops don't understand it, either.

You might actually do better if you can set up a "personal" web page and
just load the jpeg or gif files with associated URLs.

My thanks
> go to "Stray Dog" for his efforts in also experimenting with a single ended
> 6C4 triode.

Thank you for taking the time to read about my "discovery" and making an
acknowledgement. But, most of the tube transmitter schematics I ever
looked at for driver/buffer/multiplier stages sure looked like they
were running linear bias voltages on the control grids instead of
class C biases. And, it was quite an experience to see, on a quality
oscilloscope, that second harmonic come out of nothing as the air variable
capacitor was adjusted for the second harmonic frequency. And, the S-meter
on the receiver, tuned to the second harmonic frequency, also bumped up a
few S units, too, at the same time.

>
> 73, Dr. Barry L. Ornitz WA4VZQ
>
>

>

# 2210. Re: Reference oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 13:33:46 UTC
From: "Ebbe (7000)" <"es44 pc">
Message-ID: <4948ffcd$0$90272$14726298@news.sunsite.dk>
Source record: 3797

K7ITM wrote:
|
| Hmmm. Do you live in some place that does not have mail service? I
| don't recall putting any particular geographical boundaries on the
| offer.
|
| Cheers,
| Tom

Hehe, no we do still have mail, though the level of service is dropping
rapidly :-)
I was just guessing, that shipping would be too high to make it realistic.

Best regards
Ebbe

## 2211. Sexy celeb

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 14:08:50 UTC
From: elvinabr@gmail.com
Message-ID: <1b7441a3-7aed-46cc-8b53-ea59f507c71d@t39g2000prh.googlegroups.com>
Source record: 3798
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://reggi.coolpage.biz Angelina Jolie Under The Sheets Charlize Theron walks through a house, slowly peeling her clothes off! Farrah Fawcett Topless Kelly Ripa Striptease Meg Ryan Getting It On Meg hops on for the ride! Melanie Griffith Nude Check her out before her implants! If they get rid of the butch amazon woman, sign me up. Orgy - The New Reality Show Get J-Lo and her rear- end at their finest and on your screen with... Alyssa Milano Sexy Photoshoot

# 2212. Re: Reference oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 19:30:02 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <109576e8-b7b1-4dbc-98ab-7614a27145c6@i18g2000prf.googlegroups.com>
Source record: 3799

On Dec 17, 5:33 am, "Ebbe \(7000\)" <es44(snabela)pc[punktum]dk>
wrote:
...

Well, I managed to get one package down under 50 grams. Drop me an
email if interested. My call at msn.com. I tried sending you one,
but don't know if it got through.

Cheers,
Tom

# 2213. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 20:58:51 UTC
From: Mike Silva <snarflemike@yahoo.com>
Message-ID: <fe0f9c5b-263a-4f54-9350-f058c09ce17b@o4g2000pra.googlegroups.com>
Source record: 3800

On Dec 16, 9:58 am, "Rick" <rickn...@hotmail.com> wrote:
> A few years ago someone gave me a box of tube sockets and some 5763s.  I
> always wondered if they were any good.  So I built up a sloppy little
> oscillator, running on 7038 and 22 out of 23 of them oscillated.  It takes
> 17 seconds for a filament to warm up and the circuit to start putting out
> power.
> Ok so what next?  I notice in the tube manual, ARRL handbook 1966, that it
> has 13 watts plate dissipation.  Wow that seems like a lot for a little 9
> pin tube.  So I built another stage next to the oscillator and a little pi
> network output and drove the heck out of it.  Only got 3 watts.  Then double
> checked the voltages since I was running on a variac and lo and behold I
> only had 5 volts on the filament so cranked her up where she should be and
> now getting 9 watts into 50 ohms.
> Then checked the great W8JI website and see where he put some shaping into
> his DX60 to clean up the clicks so I looked at my output with a scope with
> my keyer banging away at the thing and ye Gads, a square wave.  So now
> working on values of a grid block keyer circuit to round off the edges.
> Fun stuff.
> Added a socket for an 807.  Wow, got plenty of drive !! 55 watts out with
> 600 volts on the plate.  2nd harmonic 45 db down, not too bad.  Total money
> expended to date - $zero.
> Anyone like to do something similar?  If you need a 5763 and socket just let
> me know.  All I ask is you to really use it, not just throw it in the drawer
> for some day in the future.
> Oh by the way.  This is just posted to homebrew, don't need to cross post it
> to the other newsgroups, too much of that going on.  Pick the group that it
> belongs in and they will find it if they are interested.
> 73,
> Rick  K2XT

About 5 or 6 years ago I think the government must have dumped its
supply of 5763s since they started showing up by the thousands, 1980s
manufacture. Since as a kid I had seen lots of articles that used
them, I quickly bought Too Many. I think everybody I know has at
least 25 and often 100. Since then I've donated some and sold some
and used some. It's a very nice little tube, and should last forever
(+/-) in oscillator or QRP service.

Very interesting to hear how much difference the lower heater voltage
made. It's tempting these days to just make up a 6.3VDC regulator and
be done with it.

73,
Mike, KK6GM

# 2214. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-17 21:11:47 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <aMCY2+hTsWSJFAdI@ifwtech.co.uk>
Source record: 3551

JIMMIE wrote:
>On Dec 16, 3:12ï¿½am, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
>>Circular saw blades
>> for non-ferrous metal cutting are specially designed to reduce the
>> dangers of jammed blades and flying metal.
>>
>> As well as having many small teeth, the front cutting edge of each tooth
>> slopes slightly backward to avoid digging into the soft metal (known as
>> "negative rake"). Also the top profile of each tooth is designed to
>> remove the metal as small chips.
>>
>> Even negative rake blades are not jam-proof, especially when cutting
>> through tubing. Half-way through the cut, it becomes very easy to hook a
>> tooth into the wall of the tube, and BANG - it jams. Larry is very right
>> to be using a jig to hold everything very firmly.
>>

>
>I also believe in the right tool for the right job too but when I saw
>the $80 USD price tag on the right blade using the wrong one became
>more appealing.

We can pay those prices for big-name industrial saw blades in Europe
too. However, a 10in/254mm blade with negative rake carbide teeth can
also be found for less than $30:
http://tinyurl.com/4lflw2

That's not so bad, and I'd guess that someone in the USA is selling them
too.

--

73 from Ian GM3SEK

# 2215. Re: Reference oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-18 08:23:22 UTC
From: "Ebbe (7000)" <"es44 pc">
Message-ID: <494a087c$0$90266$14726298@news.sunsite.dk>
Source record: 3552

K7ITM wrote:
| On Dec 17, 5:33 am, "Ebbe \(7000\)" <es44(snabela)pc[punktum]dk>
| wrote:
| ...
|
|
| Well, I managed to get one package down under 50 grams. Drop me an
| email if interested. My call at msn.com. I tried sending you one,
| but don't know if it got through.
|
| Cheers,
| Tom

Oh yes, Your mail found the right receiver, return mail sent :-)

Best regards
Ebbe

# 2216. Re: Wanted BC454 bfo coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-18 12:42:02 UTC
From: Andrew VK3BFA <vk3bfa@hotmail.com>
Message-ID: <b6afc7f3-a94a-43db-b5cf-5de236cac0e9@q26g2000prq.googlegroups.com>
Source record: 3553

On Dec 14, 6:30 pm, highlandham <rfbu...@nospam.com> wrote:
> ken scharf wrote:
> > Anybody have a BFO coil from a BC454 receiver?
> > I have a homebrew receiver project in mind using some of the
> > 1415 khz IF transformers out of one of these but I don't have
> > the BFO coil.
>
> ====================================
> This being a homebrew NG.....would it not be possible to make the BFO
> coil ,or is it a RF transformer , yourself ?
>
> Frank KN6WH

Your being a bit precious, surely - he is BUILDING something using
surplus bits.
Do you mine and smelt your own copper wire, then grow the cotton to
insulate it? - if not, well, are you a TRUE homebrewer?

Andrew VK3BFA.

# 2217. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 00:30:42 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <59359661-1448-4fcc-b855-c20cd8a44dca@r34g2000vbp.googlegroups.com>
Source record: 3554

Delving further I surfed across a twin blade circular saw.
Two counter rotating circular blades that leave no burrs in aluminum.
Makes lots of aluminum waste though.

73 OM
n8zu

# 2218. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 00:51:40 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <cf31fe1d-d5f0-4661-9950-4b2a1140f058@a29g2000pra.googlegroups.com>
Source record: 3555

On Dec 17, 4:11 pm, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> JIMMIE wrote:
> >On Dec 16, 3:12 am, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> >>Circular saw blades
> >> for non-ferrous metal cutting are specially designed to reduce the
> >> dangers of jammed blades and flying metal.
>
> >> As well as having many small teeth, the front cutting edge of each tooth
> >> slopes slightly backward to avoid digging into the soft metal (known as
> >> "negative rake"). Also the top profile of each tooth is designed to
> >> remove the metal as small chips.
>
> >> Even negative rake blades are not jam-proof, especially when cutting
> >> through tubing. Half-way through the cut, it becomes very easy to hook a
> >> tooth into the wall of the tube, and BANG - it jams. Larry is very right
> >> to be using a jig to hold everything very firmly.
>
> >I also believe in the right tool for the right job too but when I saw
> >the $80 USD price tag on the right blade using the wrong one became
> >more appealing.
>
> We can pay those prices for big-name industrial saw blades in Europe
> too. However, a 10in/254mm blade with negative rake carbide teeth can
> also be found for less than $30:http://tinyurl.com/4lflw2
>
> That's not so bad, and I'd guess that someone in the USA is selling them
> too.
>
> --
>
> 73 from Ian GM3SEK

If anyone over here is selling them near that price I can't find them.
I may splurge a bit and get an $80 one.
A big piece of aluminum stuck between my fingers convinced me.

Jimmie

# 2219. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 02:02:25 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <6265054f-7d25-4349-8a97-abeb6f340754@r2g2000vbp.googlegroups.com>
Source record: 3556

On Dec 18, 7:51 pm, JIMMIE <jimmi...@gmail.com> wrote:
> On Dec 17, 4:11 pm, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
>
>
>
> > JIMMIE wrote:
> > >On Dec 16, 3:12 am, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> > >>Circular saw blades
> > >> for non-ferrous metal cutting are specially designed to reduce the
> > >> dangers of jammed blades and flying metal.
>
> > >> As well as having many small teeth, the front cutting edge of each tooth
> > >> slopes slightly backward to avoid digging into the soft metal (known as
> > >> "negative rake"). Also the top profile of each tooth is designed to
> > >> remove the metal as small chips.
>
> > >> Even negative rake blades are not jam-proof, especially when cutting
> > >> through tubing. Half-way through the cut, it becomes very easy to hook a
> > >> tooth into the wall of the tube, and BANG - it jams. Larry is very right
> > >> to be using a jig to hold everything very firmly.
>
> > >I also believe in the right tool for the right job too but when I saw
> > >the $80 USD price tag on the right blade using the wrong one became
> > >more appealing.
>
> > We can pay those prices for big-name industrial saw blades in Europe
> > too. However, a 10in/254mm blade with negative rake carbide teeth can
> > also be found for less than $30:http://tinyurl.com/4lflw2
>
> > That's not so bad, and I'd guess that someone in the USA is selling them
> > too.
>
> > --
>
> > 73 from Ian GM3SEK
>
> If anyone over here is selling them near that price I can't find them.
> I may splurge a bit and get an $80 one.
> A big piece of aluminum stuck between my fingers convinced me.
>
> Jimmie

Hey OM

did you looky at harbor freight tools?

I seen a twin blade circular saw $60 only

73 OM

n8zu

# 2220. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 02:23:24 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <wAD2l.532$P5.219@nwrddc02.gnilink.net>
Source record: 3557

>> Jimmie
>
> Hey OM
>
> did you looky at harbor freight tools?
>
> I seen a twin blade circular saw $60 only
>
> 73 OM
>
> n8zu

Commercially, we use a triple chip blade. The current blade is almost 10 years old and leaves a mirror finish on the aluminum cut.

Dale W4OP

# 2221. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 03:47:20 UTC
From: Clifford Heath <no@spam.please.net>
Message-ID: <494b1992$0$32001$afc38c87@news.optusnet.com.au>
Source record: 3558

Ian White GM3SEK wrote:
> At last - someone using the right tool for the job

You can get fine-kerf angle-grinder blades, that's what I use.
They need frequent replacement, but for the occasional cut, it
beats a hacksaw.

# 2222. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 07:04:55 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <6f771a4f-9340-43ae-8774-5cb0109bfaaf@u14g2000yqg.googlegroups.com>
Source record: 3559

On Dec 18, 9:23 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
>  >> Jimmie
>
>
>
> > Hey OM
>
> > did you looky at harbor freight tools?
>
> > I seen a twin blade circular saw $60 only
>
> > 73 OM
>
> > n8zu
>
> Commercially, we use a triple chip blade. The current blade is almost 10
> years old and leaves a mirror finish on the aluminum cut.
>
> Dale W4OP

I just realized I worked 37 hrs of overtime in the last 2 weeks. I
think I am going to treat myself to one of the triple chip blades.

Jimmie

# 2223. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 15:35:54 UTC
From: Ian White GM3SEK <gm3sek@ifwtech.co.uk>
Message-ID: <94wRbmGa97SJFArU@ifwtech.co.uk>
Source record: 3560

JIMMIE wrote:
>On Dec 18, 9:23ï¿½pm, "Dale Parfitt" <pari...@verizon.net> wrote:
>>
>> Commercially, we use a triple chip blade. The current blade is almost 10
>> years old and leaves a mirror finish on the aluminum cut.
>>
>> Dale W4OP
>
>I just realized I worked 37 hrs of overtime in the last 2 weeks. I
>think I am going to treat myself to one of the triple chip blades.
>

Yeah, go on... "Because You're Worth It" :-)

--

73 from Ian GM3SEK
http://www.ifwtech.co.uk/g3sek

# 2224. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 17:14:59 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <58ec09e8-cb50-4dea-962e-3ddfc9ea06d9@v42g2000yqv.googlegroups.com>
Source record: 3561

On Dec 18, 9:23 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
>  >> Jimmie
>
>
>
> > Hey OM
>
> > did you looky at harbor freight tools?
>
> > I seen a twin blade circular saw $60 only
>
> > 73 OM
>
> > n8zu
>
> Commercially, we use a triple chip blade. The current blade is almost 10
> years old and leaves a mirror finish on the aluminum cut.
>
> Dale W4OP

Hey OM
If a twin blade 6.25 inch blade cuts like a 14 inch blade what's a
triple blade cut like?

And can you shave your face with that mirror?
That would make one heck of a disco ceiling mirror ball.

Twin blade is lifetime gaurantee.

73 OM
n8zu

# 2225. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 17:20:44 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <e3c5231d-d72a-468b-a543-4c01e541ade0@k36g2000yqe.googlegroups.com>
Source record: 3562

On Dec 19, 10:35 am, Ian White GM3SEK <gm3...@ifwtech.co.uk> wrote:
> JIMMIE wrote:
> >On Dec 18, 9:23 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
>
> >> Commercially, we use a triple chip blade. The current blade is almost 10
> >> years old and leaves a mirror finish on the aluminum cut.
>
> >> Dale W4OP
>
> >I just realized I worked 37 hrs of overtime in the last 2 weeks. I
> >think I am going to treat myself to one of the triple chip blades.
>
> Yeah, go on... "Because You're Worth It"  :-)
>
> --
>
> 73 from Ian GM3SEKhttp://www.ifwtech.co.uk/g3sek

Hey OM

Heck just across the pond in Germany they gits 4 month paid vacation
plenty of time to use a diamond fingernail file to cut that aluminum.

73 OM
n8zu

# 2226. Re: Cutting non ferrous metals with a table saw

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 17:29:33 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <1SQ2l.19$Es4.2@nwrddc01.gnilink.net>
Source record: 3563

"raypsi" <RBorowiak@gmail.com> wrote in message
news:58ec09e8-cb50-4dea-962e-3ddfc9ea06d9@v42g2000yqv.googlegroups.com...
On Dec 18, 9:23 pm, "Dale Parfitt" <pari...@verizon.net> wrote:
> >> Jimmie
>
>
>
> > Hey OM
>
> > did you looky at harbor freight tools?
>
> > I seen a twin blade circular saw $60 only
>
> > 73 OM
>
> > n8zu
>
> Commercially, we use a triple chip blade. The current blade is almost 10
> years old and leaves a mirror finish on the aluminum cut.
>
> Dale W4OP

Hey OM
If a twin blade 6.25 inch blade cuts like a 14 inch blade what's a
triple blade cut like?

And can you shave your face with that mirror?
That would make one heck of a disco ceiling mirror ball.

Twin blade is lifetime gaurantee.

73 OM
n8zu

It is a single blade- and the triple chip refers to the rake of individual
teeth. I think every aluminum house uses a triple chip blade. Not cheap at
$150 or so- but as I said, one of our blades is around 10 years old, is used
daily and still cuts with a mirror finish.

Dale W4OP

# 2227. Re: Doubling

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-19 18:09:21 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <4bdd29cc-d41d-4245-b3dd-874dd7376a55@u14g2000yqg.googlegroups.com>
Source record: 3564

On Dec 15, 11:29 pm, "NoSPAM" <unkn...@nospam.org> wrote:
> "Telstar Electronics" <briangrif...@sbcglobal.net> wrote in message
>
> news:d2b47540-3d78-46bf-8a1f-e981ad77d300@i18g2000prf.googlegroups.com...
>
> > > You mean to tell me that you take a clean sine wave... pass it
> > > through... say a single-ended class A amp... and you can put a tank on
> > > the output of that amplifier... and tune for a harmonic? You will get
> > > nothing.
>
> Of course you will.  No active device is perfect.

Hey OM
The nature of the beast is:
single ended amps produce rich even harmonics
Push Pull amps produce rich odd harmonics

so you can gits odd harmonics from single ended but they are poor like
me.

73 OM
n8zu

# 2228. Full Lattice Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-20 15:33:20 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <ef83l.10283$zs1.8113@newsfe05.iad>
Source record: 3565

I'm thinking of using the crystals from a few scrapped
Heath HR-10 receivers (cheap half lattice design) in
a cascaded half-lattice or in a full lattice filter for a
receiver project. I've found tons of info on half-lattice
design, but the full lattice info has been a problem--
anyone have any links to articles in the vintage QSTs?
I have the CDs..

Pete

# 2229. Re: Full Lattice Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-20 19:45:40 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <282362dd-7936-4401-b931-73bae1f377c5@u18g2000pro.googlegroups.com>
Source record: 3566

On Dec 20, 7:33 am, "Tio Pedro" <radioconnect...@cox.net> wrote:
> I'm thinking of using the crystals from a few scrapped
> Heath HR-10 receivers (cheap half lattice design) in
> a cascaded half-lattice or in a full lattice filter for a
> receiver project. I've found tons of info on half-lattice
> design, but the full lattice info has been a problem--
> anyone have any links to articles in the vintage QSTs?
> I have the CDs..
>
> Pete

Hola, Pedro,

I could scan sections about full lattice filters from Zverev and from Van Valkenburg into PDFs, if you're interested. For Van Valkenburg, it's a whole chapter. It would then be left as a "small exercise" to go from their math to what you want. I suspect a Spice simulation would be appropriate.

Cheers,
Tom

# 2230. Re: Full Lattice Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-20 20:28:45 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <bAc3l.107$sC4.57@newsfe04.iad>
Source record: 3567

"K7ITM" <k7itm@msn.com> wrote in message
news:282362dd-7936-4401-b931-73bae1f377c5@u18g2000pro.googlegroups.com...
On Dec 20, 7:33 am, "Tio Pedro" <radioconnect...@cox.net> wrote:
> I'm thinking of using the crystals from a few scrapped
> Heath HR-10 receivers (cheap half lattice design) in
> a cascaded half-lattice or in a full lattice filter for a
> receiver project. I've found tons of info on half-lattice
> design, but the full lattice info has been a problem--
> anyone have any links to articles in the vintage QSTs?
> I have the CDs..
>
> Pete

Hola, Pedro,

I could scan sections about full lattice filters from Zverev and from
Van Valkenburg into PDFs, if you're interested. For Van Valkenburg,
it's a whole chapter. It would then be left as a "small exercise" to
go from their math to what you want. I suspect a Spice simulation
would be appropriate.

Cheers,
Tom

Hi Tom, nothing that design heavy... I have to work with the parts
I have, and was looking for some practical guidance on the subject.
I'll have to dig into the old SSB Handbook and see if the QST
references will uncover any leads.

Pete k1zjh

# 2231. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-20 22:00:31 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <MQd3l.10654$nD1.3083@bignews5.bellsouth.net>
Source record: 3568

Mike Silva wrote:
> On Dec 16, 9:58 am, "Rick" <rickn...@hotmail.com> wrote:
>> A few years ago someone gave me a box of tube sockets and some 5763s. I
>> always wondered if they were any good. So I built up a sloppy little
>> oscillator, running on 7038 and 22 out of 23 of them oscillated. It takes
>> 17 seconds for a filament to warm up and the circuit to start putting out
>> power.
>> Ok so what next? I notice in the tube manual, ARRL handbook 1966, that it
>> has 13 watts plate dissipation. Wow that seems like a lot for a little 9
>> pin tube. So I built another stage next to the oscillator and a little pi
>> network output and drove the heck out of it. Only got 3 watts. Then double
>> checked the voltages since I was running on a variac and lo and behold I
>> only had 5 volts on the filament so cranked her up where she should be and
>> now getting 9 watts into 50 ohms.
>> Then checked the great W8JI website and see where he put some shaping into
>> his DX60 to clean up the clicks so I looked at my output with a scope with
>> my keyer banging away at the thing and ye Gads, a square wave. So now
>> working on values of a grid block keyer circuit to round off the edges.
>> Fun stuff.
>> Added a socket for an 807. Wow, got plenty of drive !! 55 watts out with
>> 600 volts on the plate. 2nd harmonic 45 db down, not too bad. Total money
>> expended to date - $zero.
>> Anyone like to do something similar? If you need a 5763 and socket just let
>> me know. All I ask is you to really use it, not just throw it in the drawer
>> for some day in the future.
>> Oh by the way. This is just posted to homebrew, don't need to cross post it
>> to the other newsgroups, too much of that going on. Pick the group that it
>> belongs in and they will find it if they are interested.
>> 73,
>> Rick K2XT
>
> About 5 or 6 years ago I think the government must have dumped its
> supply of 5763s since they started showing up by the thousands, 1980s
> manufacture. Since as a kid I had seen lots of articles that used
> them, I quickly bought Too Many. I think everybody I know has at
> least 25 and often 100. Since then I've donated some and sold some
> and used some. It's a very nice little tube, and should last forever
> (+/-) in oscillator or QRP service.
>
> Very interesting to hear how much difference the lower heater voltage
> made. It's tempting these days to just make up a 6.3VDC regulator and
> be done with it.
>
> 73,

> Mike, KK6GM
The 5763 seems to be an original design as opposed to a re-design of an octal tube into a miniature tube format. I can't find any similar beam power tubes with a 6.3v .75 amp heater in larger format.
It is amazing just how many miniature tubes are simply re-hashes of a similar tube in a larger format.

For example, the 6AQ5 is a rehash of the 6V6. The 6BQ5 and 6GK6 are rehashes of the 6F6 (which itself is a rehash of the 42 and 2A5, and similar to the directly heated '47). The 6AK6 is a rehash of the 6G6G. The 6CL6 is a rehash of the 6AG7. I could name many more, and I haven't even considered the Lockal equalivants either.

# 2232. Re: Full Lattice Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 02:09:48 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Wzh3l.285$fc3.137@newsfe02.iad>
Source record: 3569

I've figured out to use QST View... Finally! And was able to
dig up quite a few articles from the 50s into the early 60s.
I have enough reading matter to come to some conclusions..

Pete

# 2233. Re: MC2831

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 02:32:48 UTC
From: k7elp60 <k7elp60.39385d7@radiobanter.com>
Message-ID: <k7elp60.39385d7@radiobanter.com>
Source record: 3570

DaveM;658774 Wrote:
> "Scott Dorsey" kludge@panix.com wrote in message
> news:ghjt4i$ihr$1@panix2.panix.com...-
> Not really a boatanchor question, but I am looking for some of the
> old
> Motorola MC2831 FM transmitter chips which were discontinued a decade
> or
> so ago. I'd take one of the MC2833 chips which are similar (they have
> a
> second
> dedicated transistor instead of a tone generator on-chip). I'd
> prefer
> the DIP package but I'd even take an SMT that I could stick on an
> adaptor.
>
> Anybody got a couple in their junk box?
> --scott
> --
> "C'est un Nagra. C'est suisse, et tres, tres precis."-
>
>
> Consolidated Electronics online catalog says they have the MC2831 in
> stock
> (http://www.ceitron.com/semi/semi.phtml?part=MC2831).
>
> Hth,
> --
> Dave M
> MasonDG44 at comcast dot net (Just substitute the appropriate
> characters in the
> address)
>
> Life is like a roll of toilet paper; the closer it gets to the end, the
> faster
> it goes.
I have one(MC2833N) on a circuit board all wired and working as a 6M FM
transmitter as shown on a Motorola data sheet, would this be of benefit
for you?
Ned
I can be reached via email at autoivins at Q.com

--
k7elp60

## 2234. Schematic circuits to browse

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 14:45:33 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <6340c055-9019-4af0-8fc3-22c4996c8fc8@m4g2000vbp.googlegroups.com>
Source record: 3571

I found this group of schematic circuits. Many looked interesting

http://www.schematicmag.com/htm1/Sch_cic.html.

Enjoy

Jimmie

## 2235. Big Boobs on Parade

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 16:56:18 UTC
From: elvinabr@gmail.com
Message-ID: <0b599d6c-9a90-4bac-9b52-94a5c583fa29@u18g2000pro.googlegroups.com>
Source record: 3572
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://sosed.smutwebsites.com/ Big Boobs on Parade rulez the world of Big Boobs! This site offers a categorized selection of the most unique Free Big Boobs Movies ever filmed. Our team of hard working slaves picks each and every one of these fine babes warranting the finest big boobs videos for our fellow surfers

# 2236. Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 18:25:47 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <8eac5907-d1ed-4cba-bff9-0be68557b4e3@f18g2000vbf.googlegroups.com>
Source record: 3573

Good afternoon you all, I just got an early Christmas president. My friend dropped off a Radio Shack Pro 2011 scanner a couple of weeks ago for me to take a look at and now he says for me to just keep it. The problem seems to be in the liitle uP board. It will work a while and then just go crazy. I thought maybe it was a power supply problem but even running it from a battery doesnt help. Ive tried replacing caps on the uP board with no help. I had really given up on it but I would like to try one other thing now that its mine. IF I could bet a schematic on the thing I would like to see if I could control the radio from a PC port. I have done this before by bit banging data into the PLL circuit.

If you have a schematic you could email me I would be thankful.

# 2237. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 19:38:01 UTC
From: Mike Silva <snarflemike@yahoo.com>
Message-ID: <f7ac74e2-433c-4e0e-86c8-e222d0feaffe@v13g2000yqm.googlegroups.com>
Source record: 3574

On Dec 20, 5:00 pm, ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
> Mike Silva wrote:
> > On Dec 16, 9:58 am, "Rick" <rickn...@hotmail.com> wrote:
> >> A few years ago someone gave me a box of tube sockets and some 5763s.  I
> >> always wondered if they were any good.  So I built up a sloppy little
> >> oscillator, running on 7038 and 22 out of 23 of them oscillated.  It takes
> >> 17 seconds for a filament to warm up and the circuit to start putting out
> >> power.
> >> Ok so what next?  I notice in the tube manual, ARRL handbook 1966, that it
> >> has 13 watts plate dissipation.  Wow that seems like a lot for a little 9
> >> pin tube.  So I built another stage next to the oscillator and a little pi
> >> network output and drove the heck out of it.  Only got 3 watts.  Then double
> >> checked the voltages since I was running on a variac and lo and behold I
> >> only had 5 volts on the filament so cranked her up where she should be and
> >> now getting 9 watts into 50 ohms.
> >> Then checked the great W8JI website and see where he put some shaping into
> >> his DX60 to clean up the clicks so I looked at my output with a scope with
> >> my keyer banging away at the thing and ye Gads, a square wave.  So now
> >> working on values of a grid block keyer circuit to round off the edges.
> >> Fun stuff.
> >> Added a socket for an 807.  Wow, got plenty of drive !! 55 watts out with
> >> 600 volts on the plate.  2nd harmonic 45 db down, not too bad.  Total money
> >> expended to date - $zero.
> >> Anyone like to do something similar?  If you need a 5763 and socket just let
> >> me know.  All I ask is you to really use it, not just throw it in the drawer
> >> for some day in the future.
> >> Oh by the way.  This is just posted to homebrew, don't need to cross post it
> >> to the other newsgroups, too much of that going on.  Pick the group that it
> >> belongs in and they will find it if they are interested.
> >> 73,
> >> Rick  K2XT
>
> > About 5 or 6 years ago I think the government must have dumped its
> > supply of 5763s since they started showing up by the thousands, 1980s
> > manufacture.  Since as a kid I had seen lots of articles that used
> > them, I quickly bought Too Many.  I think everybody I know has at
> > least 25 and often 100.  Since then I've donated some and sold some
> > and used some.  It's a very nice little tube, and should last forever
> > (+/-) in oscillator or QRP service.
>
> > Very interesting to hear how much difference the lower heater voltage
> > made.  It's tempting these days to just make up a 6.3VDC regulator and
> > be done with it.
>

> > 73,
> > Mike, KK6GM
>
> The 5763 seems to be an original design as opposed to a re-design of an
> octal tube into a miniature tube format.  I can't find any similar beam
> power tubes with a 6.3v .75 amp heater in larger format.
> It is amazing just how many miniature tubes are simply re-hashes of a
> similar tube in a larger format.
>
> For example, the 6AQ5 is a rehash of the 6V6.  The 6BQ5 and 6GK6 are
> rehashes of the 6F6 (which itself is a rehash of the 42 and 2A5, and
> similar to the directly heated '47).  The 6AK6 is a rehash of the 6G6G.
> The 6CL6 is a rehash of the 6AG7. I could name many more, and I haven't
> even considered the Lockal equalivants either.- Hide quoted text -
>
> - Show quoted text -

You're right on both counts. The 5763 is an original design (at
least, I've never seen anything like it in octal), and most of the
first generation miniature tubes were direct or near-direct copies of
existing octal designs. Only later did the myriad tubes intended for
TV service appear, and to a much smaller degree, the hi-fi tubes.

73,
Mike, KK6GM

## 2238. Raising laptop headphone output to line level

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 19:45:51 UTC
From: "Tom, N3IJ" <n3ij@comcast.net>
Message-ID: <c50e4df8-395f-430e-b8ab-dd0ca43c470c@w24g2000prd.googlegroups.com>
Source record: 3575

Can anyone suggest a source of a circuit or kit for a mono amp to increase my laptop's headphone output level to line level?

As a starting point, it would be helpful just to learn what these levels are. I want to drive a line-level transceiver input for digital hamming.

Any suggestions would be appreciated.

Tnx & 73, Tom

# 2239. Re: Raising laptop headphone output to line level

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 19:57:03 UTC
From: Dee Flint <deeflint01@comcast.net>
Message-ID: <gim72f$jhb$1@news.motzarella.org>
Source record: 3576

"Tom, N3IJ" <n3ij@comcast.net> wrote in message
news:c50e4df8-395f-430e-b8ab-dd0ca43c470c@w24g2000prd.googlegroups.com...
> Can anyone suggest a source of a circuit or kit for a mono amp to
> increase my laptop's headphone output level to line level?
>
> As a starting point, it would be helpful just to learn what these
> levels are. I want to drive a line-level transceiver input for digital
> hamming.
>
> Any suggestions would be appreciated.
>
> Tnx & 73, Tom

Typically it needs DECREASED not increased. There are circuits on the internet for attenuating the output sound level from the computer to be acceptable to the radio for digital modes. One could potentially use the volume control on the computer but since the level is relatively high, it's hard to get the fine control without an attenuator between the computer and radio.

Dee, N8UZE

# 2240. Re: Raising laptop headphone output to line level

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 23:13:01 UTC
From: No Spam <nospam@nospam.com>
Message-ID: <gimihs$l3n$1@news.albasani.net>
Source record: 3577

On Sun, 21 Dec 2008 11:45:51 -0800, Tom, N3IJ wrote:

> Can anyone suggest a source of a circuit or kit for a mono amp to
> increase my laptop's headphone output level to line level?
>
> As a starting point, it would be helpful just to learn what these levels
> are. I want to drive a line-level transceiver input for digital hamming.
>
> Any suggestions would be appreciated.

You have an impedance mis-match. Use a radioshack xformer with the 8ohm
side on the headphones jack and the 5k output to the line level. You will
need a pad or simply a pot after that.

# 2241. Re: Raising laptop headphone output to line level

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-21 23:18:13 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <37a317f9-cc04-4ac6-9c53-245c557c1cb9@g38g2000yqn.googlegroups.com>
Source record: 3578

On Dec 21, 2:57 pm, "Dee Flint" <deeflin...@comcast.net> wrote:
> "Tom, N3IJ" <n...@comcast.net> wrote in message
>
> news:c50e4df8-395f-430e-b8ab-dd0ca43c470c@w24g2000prd.googlegroups.com...
>
> > > Can anyone suggest a source of a circuit or kit for a mono amp to
> > > increase my laptop's headphone output level to line level?
>
> > > As a starting point, it would be helpful just to learn what these
> > > levels are. I want to drive a line-level transceiver input for digital
> > > hamming.
>
> > > Any suggestions would be appreciated.
>
> > > Tnx & 73, Tom
>
> Typically it needs DECREASED not increased.  There are circuits on the
> internet for attenuating the output sound level from the computer to be
> acceptable to the radio for digital modes.  One could potentially use the
> volume control on the computer but since the level is relatively high, it's
> hard to get the fine control without an attenuator between the computer and
> radio.
>
> Dee, N8UZE

I saw something with an 8 ohm resistor from the output of the
soundboard to ground and a 10k resistor from there to the input of a
tape recorder.

Jimmie

# 2242. Re: Interface Toughbook Mic Input to Line Out from SWL's PSK20

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 05:26:46 UTC
From: "Tom, N3IJ" <n3ij@comcast.net>
Message-ID: <d555423c-4882-4b14-9798-05304bdab9ed@m12g2000vbp.googlegroups.com>
Source record: 3579

On Nov 27, 11:35 am, "Tom, N3IJ" <n...@comcast.net> wrote:
> I want to interface the audio from the Small Wonder Labs PSK20 to the
> mic input in the Toughbook CF27 laptop. The computer has no line
> input, and I plan to use the mic input via the port replicator. The
> Toughbook reference manual doesn't give any specs for the mic input.
> The user manual does contain this caution:
>
> "Use only a monaural condenser microphone (miniature jack). Using
> an input source other than a monaural condenser microphone
> may not allow audio to be input or may damage the equipment."
>
> Reading suggests that an L pad in the 40-60 dB range is required, but
> I would like to narrow this down before experimenting. Any experiences
> using the Toughbook on PSK would be helpful.
>
> Thanks, Tom, N3IJ

What I ended up with is an L-pad with 10K in series with the input and
100 across the output. This is supposed to be a 40dB pad. I may need
something in the high 30s instead of 40, because to get a satisfactory
waterfall, I need to max the mic gain in Windows 2K. Tomorrow I'll get
a 5K pot and connect it in series with a 5K resistor in place of the
current 10K resistor. 8-9K might be where I need to be to have the
Windows level control somewhere in the middle of its range.

Thanks to all for the suggestions.

Tom

# 2243. Rig Response 3 , expected 38

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 05:32:55 UTC
From: fazamy <fazamy@aol.com>
Message-ID: <9f8a03d9-db46-441f-aece-75c28afe3400@e3g2000vbe.googlegroups.com>
Source record: 3580

I've posted this on the XmLog group without a response explaining the meaning of this message: "Rig Response 3 , expected 38." Attempting to configure a so-called virtual com port from a freeware program so that I can run that log software on a discrete port, I get that message. What is 3? And if 38 is the optimal figure, how do I get to 38?

Is there nyone in this group who can explain this?

Thanks & 73,
Evan

# 2244. Re: Raising laptop headphone output to line level

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 11:14:56 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <SEK3l.73116$5P1.53498@newsfe13.iad>
Source record: 3581

Tom,

I'm not using a laptop, but my desktop has sufficient audio output to drive
line-in levels on the rear of Icom transceivers. If your laptop does not
produce high enough levels (see other responses about impedance matching),
it might be cheaper and "cleaner" to buy a little USB audio sound card
(Turtle Beach has one for $30, about the size of a thumb drive) and grab
audio output from that.
--
-larry
K8UT
"Tom, N3IJ" <n3ij@comcast.net> wrote in message
news:c50e4df8-395f-430e-b8ab-dd0ca43c470c@w24g2000prd.googlegroups.com...
> Can anyone suggest a source of a circuit or kit for a mono amp to
> increase my laptop's headphone output level to line level?
>
> As a starting point, it would be helpful just to learn what these
> levels are. I want to drive a line-level transceiver input for digital
> hamming.
>
> Any suggestions would be appreciated.
>
> Tnx & 73, Tom

# 2245. Re: Raising laptop headphone output to line level

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 15:21:09 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <GfO3l.483$an4.52@newsfe08.iad>
Source record: 3582

"No Spam" <nospam@nospam.com> wrote in message
news:gimihs$l3n$1@news.albasani.net...
> On Sun, 21 Dec 2008 11:45:51 -0800, Tom, N3IJ wrote:
>
>> Can anyone suggest a source of a circuit or kit for a mono amp to
>> increase my laptop's headphone output level to line level?
>>
>> As a starting point, it would be helpful just to learn what these levels
>> are. I want to drive a line-level transceiver input for digital hamming.
>>
>> Any suggestions would be appreciated.
>
> You have an impedance mis-match. Use a radioshack xformer with the 8ohm
> side on the headphones jack and the 5k output to the line level. You will
> need a pad or simply a pot after that.

An impedance mismatch in this case only equates to a possible power loss.
The transformer (I think RS only offers a 600:600 ohm line transformer)
is good because it offers some isolation between the equipment.

Is your laptop audio stereo or mono? You'll have to take that into
consideration,
since you don't want to short on of the channels using a mono plug.
If stereo, you will need to work up some sort of passive mixer
(resistors would do it) to combine the two channels.

Pete

# 2246. Re: Rig Response 3 , expected 38

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 16:34:26 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812221626260.7004@sdf.lonestar.org>
Source record: 3583

On Sun, 21 Dec 2008, fazamy wrote:

> Date: Sun, 21 Dec 2008 21:32:55 -0800 (PST)
> From: fazamy <fazamy@aol.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Rig Response 3 , expected 38
>
> I've posted this on the XmLog group without a response explaining the
> meaning of this message: "Rig Response 3 , expected 38." Attempting
> to configure a so-called virtual com port from a freeware program so
> that I can run that log software on a discrete port, I get that
> message. What is 3? And if 38 is the optimal figure, how do I get to
> 38?
>
> Is there nyone in this group who can explain this?
>
> Thanks & 73,
> Evan
>

It would help if you listed critical details like:

1. what is the name of the application.
2. its version number.
3. whether the documentation specifies what kind of operating system it
needs, what kind of hardware is a pre-requisit. And, whether there
is a "readme" file with description of issues.
4. what OS you actually are using.
5. whether you attempted to contact the source of the software for an
answer.
6. whether the com port is specifiable from the software.
7. does the com port hardware actually exist and correspond to what is
configurable from the software.
8. and out of curiosity, what is supposed to go in or out of the com port
in this "logging" software? And, what is it supposed to connect with?
9. did you buy the software or get it from someone else who has it
working? (ask them for help?).

That is for starters.

# 2247. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 17:33:41 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <eb8e9b49-5957-48ed-a844-dbdc667e64ef@x14g2000yqk.googlegroups.com>
Source record: 3584

On Dec 21, 1:25 pm, JIMMIE <jimmi...@gmail.com> wrote:
> Good afternoon you all, I just got an early Christmas president. My
> friend dropped off a Radio Shack Pro 2011 scanner  a couple of weeks
> ago for me to take a look at and now he says for me to just keep it.
> The problem seems to be in the liitle uP board. It will work a while
> and then just go crazy. I thought maybe it was a power supply problem
> but even running it from a battery doesnt help. Ive tried replacing
> caps on the uP board with no help. I had really given up on it but I
> would like to try one other thing now that its mine. IF I could bet a
> schematic on the thing I would like to see if I could control the
> radio from a PC port. I have done this before by bit banging data into
> the PLL circuit.
>
> If you have a schematic you could email me I would be thankful.

Hey I found the problem. The little board isnt a uP board after all. I thought the big glob of epoxy on it was encapsulating a uP. Apparently its just a keyboard matrix with the decoding done on the main board. I found some really bad cold soder joints that connected the keypad to the main board. When I pulled the wires loose they had no solder on them at all. Called my friend and told him to come get it and he still said it was mine. I would still like a schematic or sevice manual for it. Does anyone know how old it is. Also I think GRE made the radio and also sold the radio under their name. Does anyone know which model that was.

Jimmie

# 2248. Re: Raising laptop headphone output to line level

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 18:46:11 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <f74b3c5e-5806-4b12-b790-6f09679f0960@y1g2000pra.googlegroups.com>
Source record: 3585

On Dec 21, 2:45 pm, "Tom, N3IJ" <n...@comcast.net> wrote:
> Can anyone suggest a source of a circuit or kit for a mono amp to
> increase my laptop's headphone output level to line level?
>
> As a starting point, it would be helpful just to learn what these
> levels are. I want to drive a line-level transceiver input for digital
> hamming.
>
> Any suggestions would be appreciated.

Line Level for consumer audio is -10dBV or 0.316V RMS or just below a volt peak-to-peak. Solid state audio equipment typically has an input impedance in the kohm range.

Usually a headphone jack has more than enough output. Some sound cards or laptops are "energy smart" and turn off the output if they don't see a low-impedance load plugged in. Other times they have their own volume controls that can be overridden by Windows and sound card settings. Other times common-mode noise can dominate (drowning out the signal) giving a very real advantage to using an isolation transformer. There are many many articles on the web about using isolation transformers to hook your computer to your radio.

Tim N3QE

# 2249. Re: Rig Response 3 , expected 38

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 22:08:30 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrngl03uu.mos.bit-bucket@shell.config.com>
Source record: 3586

On Mon, 22 Dec 2008 16:34:26 +0000, Stray Dog wrote:
> On Sun, 21 Dec 2008, fazamy wrote:
>
>> Date: Sun, 21 Dec 2008 21:32:55 -0800 (PST)
>> From: fazamy <fazamy@aol.com>
>> Newsgroups: rec.radio.amateur.homebrew
>> Subject: Rig Response 3 , expected 38
>>
>> I've posted this on the XmLog group without a response explaining the
>> meaning of this message: "Rig Response 3 , expected 38." Attempting
>> to configure a so-called virtual com port from a freeware program so
>> that I can run that log software on a discrete port, I get that
>> message. What is 3? And if 38 is the optimal figure, how do I get to
>> 38?
>>
>> Is there nyone in this group who can explain this?
>
> It would help if you listed critical details like:
>
> 1. what is the name of the application.
> 2. its version number.
> 3. whether the documentation specifies what kind of operating system it
> needs, what kind of hardware is a pre-requisit. And, whether there
> is a "readme" file with description of issues.
> 4. what OS you actually are using.
> 5. whether you attempted to contact the source of the software for an
> answer.
> 6. whether the com port is specifiable from the software.
> 7. does the com port hardware actually exist and correspond to what is
> configurable from the software.
> 8. and out of curiosity, what is supposed to go in or out of the com port
> in this "logging" software? And, what is it supposed to connect with?
> 9. did you buy the software or get it from someone else who has it
> working? (ask them for help?).
>
> That is for starters.

Really?

0.5. What does this have to do with homebrew?

# 2250. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-22 23:52:40 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <rEV3l.11541$dc4.4642@bignews2.bellsouth.net>
Source record: 3587

Mike Silva wrote:
> On Dec 20, 5:00 pm, ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
>> Mike Silva wrote:
>>> On Dec 16, 9:58 am, "Rick" <rickn...@hotmail.com> wrote:
>>>> A few years ago someone gave me a box of tube sockets and some 5763s. I
>>>> always wondered if they were any good. So I built up a sloppy little
>>>> oscillator, running on 7038 and 22 out of 23 of them oscillated. It takes
>>>> 17 seconds for a filament to warm up and the circuit to start putting out
>>>> power.
>>>> Ok so what next? I notice in the tube manual, ARRL handbook 1966, that it
>>>> has 13 watts plate dissipation. Wow that seems like a lot for a little 9
>>>> pin tube. So I built another stage next to the oscillator and a little pi
>>>> network output and drove the heck out of it. Only got 3 watts. Then double
>>>> checked the voltages since I was running on a variac and lo and behold I
>>>> only had 5 volts on the filament so cranked her up where she should be and
>>>> now getting 9 watts into 50 ohms.
>>>> Then checked the great W8JI website and see where he put some shaping into
>>>> his DX60 to clean up the clicks so I looked at my output with a scope with
>>>> my keyer banging away at the thing and ye Gads, a square wave. So now
>>>> working on values of a grid block keyer circuit to round off the edges.
>>>> Fun stuff.
>>>> Added a socket for an 807. Wow, got plenty of drive !! 55 watts out with
>>>> 600 volts on the plate. 2nd harmonic 45 db down, not too bad. Total money
>>>> expended to date - $zero.
>>>> Anyone like to do something similar? If you need a 5763 and socket just let
>>>> me know. All I ask is you to really use it, not just throw it in the drawer
>>>> for some day in the future.
>>>> Oh by the way. This is just posted to homebrew, don't need to cross post it
>>>> to the other newsgroups, too much of that going on. Pick the group that it
>>>> belongs in and they will find it if they are interested.
>>>> 73,
>>>> Rick K2XT
>>> About 5 or 6 years ago I think the government must have dumped its
>>> supply of 5763s since they started showing up by the thousands, 1980s
>>> manufacture. Since as a kid I had seen lots of articles that used
>>> them, I quickly bought Too Many. I think everybody I know has at
>>> least 25 and often 100. Since then I've donated some and sold some
>>> and used some. It's a very nice little tube, and should last forever
>>> (+/-) in oscillator or QRP service.
>>> Very interesting to hear how much difference the lower heater voltage
>>> made. It's tempting these days to just make up a 6.3VDC regulator and
>>> be done with it.
>>> 73,
>>> Mike, KK6GM

>> The 5763 seems to be an original design as opposed to a re-design of an
>> octal tube into a miniature tube format. I can't find any similar beam
>> power tubes with a 6.3v .75 amp heater in larger format.
>> It is amazing just how many miniature tubes are simply re-hashes of a
>> similar tube in a larger format.
>>
>> For example, the 6AQ5 is a rehash of the 6V6. The 6BQ5 and 6GK6 are
>> rehashes of the 6F6 (which itself is a rehash of the 42 and 2A5, and
>> similar to the directly heated '47). The 6AK6 is a rehash of the 6G6G.
>> The 6CL6 is a rehash of the 6AG7. I could name many more, and I haven't
>> even considered the Lockal equalivants either.- Hide quoted text -
>>
>> - Show quoted text -
>
> You're right on both counts. The 5763 is an original design (at
> least, I've never seen anything like it in octal), and most of the
> first generation miniature tubes were direct or near-direct copies of
> existing octal designs. Only later did the myriad tubes intended for
> TV service appear, and to a much smaller degree, the hi-fi tubes.
>
> 73,
> Mike, KK6GM
Most of the 'HiFi' tubes were better build versions of existing tubes.
The improvements reduced hum by shielding G1 better from the heater, and
also reduced microphonics by simply building the tubes more rigid and
rugged ("like a brick s@#T house"). They were probably tested better
too, with the ones not making the grade re-branded with the part number
of the original lower grade type.

## 2251. Lesbians cuple USA

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-24 22:26:47 UTC
From: elvinabr@gmail.com
Message-ID: <0a03888d-57a5-448b-9960-f16acba72abf@w1g2000prm.googlegroups.com>
Source record: 3588
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

Lesbi cuple want sex right now http://lesbicouple.pornblink.com/

## 2252. Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 01:58:09 UTC
From: Bill M <radioexray@geemail.com>
Message-ID: <giupbk0gnv@news3.newsguy.com>
Source record: 3589

I'm a little confused again.

Setting up a 1624 tube for cathode biasing and also need to create a center tap for keying to ground.

The book says 610 ohms at my voltage. So would I use a pair of 1200 ohm resistors in this case?

My logic is since there is not a separate cathode then the two R in parallel would raise the filament 'cathode' 600 ohms above B-minus.

TIA and Merry Christmas,

Bill

# 2253. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 06:17:10 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <JOKdndxVR-3GuM7UnZ2dnUVZ_hOdnZ2d@web-ster.com>
Source record: 3590

Bill M wrote:
> I'm a little confused again.
>
> Setting up a 1624 tube for cathode biasing and also need to create a
> center tap for keying to ground.
>
> The book says 610 ohms at my voltage. So would I use a pair of 1200 ohm
> resistors in this case?
>
> My logic is since there is not a separate cathode then the two R in
> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>
> TIA and Merry Christmas,
>
> Bill

(Disclaimer -- I haven't done this. It's just knowledge gotten from
lots of books, and lots of solid-state circuit design experience).

No, because all the filament voltage will go to mildly heating up the
resistors, and none will go to wildly heating up the filament.

Use a center-tapped filament transformer, and put the 600 ohm resistor
between its center tap and ground. If necessary, use a separate
transformer just for the 1624s.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 2254. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 16:00:55 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <N4O4I.13124$UI2.10089@bignews6.bellsouth.net>
Source record: 3591

Bill M wrote:
> I'm a little confused again.
>
> Setting up a 1624 tube for cathode biasing and also need to create a
> center tap for keying to ground.
>
> The book says 610 ohms at my voltage. So would I use a pair of 1200 ohm
> resistors in this case?
>
> My logic is since there is not a separate cathode then the two R in
> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>
> TIA and Merry Christmas,
>
> Bill
If the tube filament is running on AC then a resistor from the transformer winding center tap to ground would do the job. If the filament winding isn't center tapped, then two resistors form the center tap. Usually two low ohm resistors (say 22 ohms) are used with a third resistor to ground for the cathode bias from the junction of the two resistors.
You could just use two larger resistors as you suggest, but in the case of an audio amplifier how would you bypass it with a capacitor? (use TWO capacitors).

If the tube filament is running on AC then the problem is compounded since you might not be able to isolate the filament supply from ground. Guess battery operated radios used C batteries.

# 2255. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 16:03:48 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <t7O4l.13126$UI2.1453@bignews6.bellsouth.net>
Source record: 3592

Tim Wescott wrote:
> Bill M wrote:
>> I'm a little confused again.
>>
>> Setting up a 1624 tube for cathode biasing and also need to create a
>> center tap for keying to ground.
>>
>> The book says 610 ohms at my voltage. So would I use a pair of 1200
>> ohm resistors in this case?
>>
>> My logic is since there is not a separate cathode then the two R in
>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>
>> TIA and Merry Christmas,
>>
>> Bill
>
> (Disclaimer -- I haven't done this. It's just knowledge gotten from
> lots of books, and lots of solid-state circuit design experience).
>
> No, because all the filament voltage will go to mildly heating up the
> resistors, and none will go to wildly heating up the filament.
>
> Use a center-tapped filament transformer, and put the 600 ohm resistor
> between its center tap and ground. If necessary, use a separate
> transformer just for the 1624s.
>
If his un-centertapped filament winding is ONLY supplying that one tube
and he has each leg going to ground through a 1200 ohm resistor that
would result in a 600 ohm connection to ground. So it should work.
Remember that's 2400 ohms across the filament, it won't suck up much
heater current at all.

## 2256. capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 16:06:38 UTC
From: swapu <swapna_kolluru@yahoo.com>
Message-ID: <fce61c84-61f5-4a61-b899-829cf3f82deb@u18g2000pro.googlegroups.com>
Source record: 3593

A capacitor is an electrical/electronic device that can store energy
in the electric field between a pair of conductors (called "plates").
The process of storing energy in the capacitor is known as "charging",
and involves electric charges of equal magnitude, but opposite
polarity, building up on each plate.

http://electronicstopics.blogspot.com/2008/10/capacitor.html

# 2257. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 17:15:37 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <1dP4l.3441$Uk3.619@newsfe10.iad>
Source record: 3594

"Bill M" <radioexray@geemail.com> wrote in message
news:giupbk0gnv@news3.newsguy.com...
> I'm a little confused again.
>
> Setting up a 1624 tube for cathode biasing and also need to create a
> center tap for keying to ground.
>
> The book says 610 ohms at my voltage. So would I use a pair of 1200 ohm
> resistors in this case?
>

Correct, both resistors would essentially be in parallel, and from
the hot cathode to ground. Using two resistors would help
balance out the 60 cycle hum as an added benefit, which is
what I assume you're trying to accomplish.

Pete

# 2258. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 17:46:57 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <1f42d213-5a49-4d5e-8ad3-8ba7a03036e0@k36g2000pri.googlegroups.com>
Source record: 3595

On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
> I'm a little confused again.
>
> Setting up a 1624 tube for cathode biasing and also need to create a
> center tap for keying to ground.
>
> The book says 610 ohms at my voltage. So would I use a pair of 1200 ohm
> resistors in this case?
>
> My logic is since there is not a separate cathode then the two R in
> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>
> TIA and Merry Christmas,
>
> Bill

hey OM:

Exactly and you will need at least 10 watts of resistors to be safe.
Because they also will have to handle plate, grid1, grid2, and the
current they draw across the filament. I suppose if they where wire
wound like 25 watt you could stick a ferrite rod in their hole and
make them your filament chokes also. But if you use carbon comp
resistors then part of your drive will go heating those resistors, so
not much gain going on there.

73 OM
n8zu

# 2259. Re: capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 18:24:32 UTC
From: "i3hev, mario" <marioheld@tiscali.it>
Message-ID: <4953cfbf$0$11386$5fc30a8@news.tiscali.it>
Source record: 3596

swapu wrote:

> A capacitor is an electrical/electronic device...

wow, a great piece of news! :)

--
73 es 51 de i3hev, op. mario

Non ï¿½ Radioamatore, se non gli fuma il saldatore!
- Campagna 2006 "Il Radioamatore non ï¿½ uno che ascolta la radio"

it.hobby.radioamatori.moderato
http://digilander.libero.it/hamweb
http://digilander.libero.it/esperantovenezia

# 2260. Re: Rig Response 3 , expected 38

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 18:36:01 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <01a6435a-977f-4791-843c-b4eaac39ab6f@i24g2000prf.googlegroups.com>
Source record: 3597

On Dec 22, 5:08 pm, Allodoxaphobia <bit-buc...@config.com> wrote:
> On Mon, 22 Dec 2008 16:34:26 +0000, Stray Dog wrote:
> > On Sun, 21 Dec 2008, fazamy wrote:
>
> >> Date: Sun, 21 Dec 2008 21:32:55 -0800 (PST)
> >> From: fazamy <faz...@aol.com>
> >> Newsgroups: rec.radio.amateur.homebrew
> >> Subject: Rig Response 3 , expected 38
>
> >> I've posted this on the XmLog group without a response explaining the
> >> meaning of this message: "Rig Response 3 , expected 38." Attempting
> >> to configure a so-called virtual com port from a freeware program so
> >> that I can run that log software on a discrete port, I get that
> >> message. What is 3? And if 38 is the optimal figure, how do I get to
> >> 38?
>
> >> Is there nyone in this group who can explain this?
>
> > It would help if you listed critical details like:
>
> > 1. what is the name of the application.
> > 2. its version number.
> > 3. whether the documentation specifies what kind of operating system it
> > needs, what kind of hardware is a pre-requisit. And, whether there
> > is a "readme" file with description of issues.
> > 4. what OS you actually are using.
> > 5. whether you attempted to contact the source of the software for an
> > answer.
> > 6. whether the com port is specifiable from the software.
> > 7. does the com port hardware actually exist and correspond to what is
> > configurable from the software.
> > 8. and out of curiosity, what is supposed to go in or out of the com port
> > in this "logging" software? And, what is it supposed to connect with?
> > 9. did you buy the software or get it from someone else who has it
> > working? (ask them for help?).
>
> > That is for starters.
>
> Really?
>
> 0.5. What does this have to do with homebrew?

hey OM:

Well you have to be desperate to ask what does it have to do with homebrew?
When you should have asked: what does it have to do with amateur radio homebrew?

But this ham needs is support. Not condescending attitudes. His first problem is he gots Windoz.
The second trouble is that's like freeware. You gits no support.

A whois lookup of xmlog.com I finds this information:

Administrative Contact:
McAmis, Mike m.mcamis@VALLEY.NET
Blat
433 Hanover Center Road
Etna, NH 03750
US
603-643-4361 fax: 603-643-4217

Now that FAX number is sum church. So whether you can gits ahold of Mike at the phone number listed as his registrar contact, you might end up on a wild goose chase.
Maybe you should try emailing mike.

It's obvious what that means, the freeware is looking for a 38 and your rig is telling the freeware 3. Your'e set up for the wrong rig. You have to go into the settings and find what rig is listed as 3 and set the sittings for that rig.

Towit it's like you set it up for say a 706MkII when you should have set it up for a 706MkIIG.

Now if you can't figure it out then you are going to have to try them all twice. The second times always the charm.

good luck on straight key night.

73 OM
n8zu

# 2261. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 18:47:23 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <6b6bec9f-9cc4-40cc-b043-d213c606ff92@z28g2000prd.googlegroups.com>
Source record: 3598

On Dec 25, 12:46 pm, raypsi <RBorow...@gmail.com> wrote:
> On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
>
> > I'm a little confused again.
>
> > Setting up a 1624 tube for cathode biasing and also need to create a
> > center tap for keying to ground.
>
> > The book says 610 ohms at my voltage. So would I use a pair of 1200 ohm
> > resistors in this case?
>
> > My logic is since there is not a separate cathode then the two R in
> > parallel would raise the filament 'cathode' 600 ohms above B-minus.
>
> > TIA and Merry Christmas,
>
> > Bill
>
> hey OM:
>
> Exactly and you will need at least 10 watts of resistors to be safe.
> Because they also will have to handle plate, grid1, grid2, and the
> current they draw across the filament. I suppose if they where wire
> wound like 25 watt you could stick a ferrite rod in their hole and
> make them your filament chokes also. But if you use carbon comp
> resistors then part of your drive will go heating those resistors, so
> not much gain going on there.
>
> 73 OM
> n8zu

Well they ain't filament chokes, but in the drive circuit the drive
signal won't go to heating them up if they are chokes. So they will
only be taking about 1 mil of current from the filament circuit.

73
n8zu

# 2262. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 19:25:11 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <h4R4l.13210$UI2.4658@bignews6.bellsouth.net>
Source record: 3599

raypsi wrote:
> On Dec 25, 12:46 pm, raypsi <RBorow...@gmail.com> wrote:
>> On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
>>
>>> I'm a little confused again.
>>> Setting up a 1624 tube for cathode biasing and also need to create a
>>> center tap for keying to ground.
>>> The book says 610 ohms at my voltage. So would I use a pair of 1200 ohm
>>> resistors in this case?
>>> My logic is since there is not a separate cathode then the two R in
>>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>> TIA and Merry Christmas,
>>> Bill
>> hey OM:
>>
>> Exactly and you will need at least 10 watts of resistors to be safe.
>> Because they also will have to handle plate, grid1, grid2, and the
>> current they draw across the filament. I suppose if they where wire
>> wound like 25 watt you could stick a ferrite rod in their hole and
>> make them your filament chokes also. But if you use carbon comp
>> resistors then part of your drive will go heating those resistors, so
>> not much gain going on there.
>>
>> 73 OM
>> n8zu
>
> Well they ain't filament chokes, but in the drive circuit the drive
> signal won't go to heating them up if they are chokes. So they will
> only be taking about 1 mil of current from the filament circuit.
>
> 73
> n8zu
One possible problem. If this is an RF amplifier circuit you probably
want to use NON-INDUCTIVE resistors in the circuit or they WILL act as
chokes!

# 2263. Re: capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 22:11:29 UTC
From: You <you@shadow.orgs>
Message-ID: <you-9218A1.13121025122008@netnews.worldnet.att.net>
Source record: 3600

In article
<fce61c84-61f5-4a61-b899-829cf3f82deb@u18g2000pro.googlegroups.com>,
swapu <swapna_kolluru@yahoo.com> wrote:

> A capacitor is an electrical/electronic device that can store energy
> in the electric field between a pair of conductors (called "plates").
> The process of storing energy in the capacitor is known as "charging",
> and involves electric charges of equal magnitude, but opposite
> polarity, building up on each plate.
>
> http://electronicstopics.blogspot.com/2008/10/capacitor.html

SSSTOP the Presses,this is BIG News... Get out a Special Edition...
This Yahoo Dufus has made a GIANt Breakthru in Electronic Theory....

Sonny, give the world a break, and take you BS somewhere else....

# 2264. Re: capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 22:30:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <pldd26-4h4.ln1@mail.specsol.com>
Source record: 3351

swapu <swapna_kolluru@yahoo.com> wrote:

Yet another attempt to get traffic at his web site.

This twit has been spamming the physics groups with similar nonsense.

--
Jim Pennino

Remove .spam.sux to reply.

# 2265. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-25 23:19:14 UTC
From: Tim Wescott <tim@justseemywebsite.com>
Message-ID: <_f2dnQI3I4FvicnUnZ2dnUVZ_j-dnZ2d@web-ster.com>
Source record: 3352

On Thu, 25 Dec 2008 11:03:48 -0500, ken scharf wrote:

> Tim Wescott wrote:
>> Bill M wrote:
>>> I'm a little confused again.
>>>
>>> Setting up a 1624 tube for cathode biasing and also need to create a
>>> center tap for keying to ground.
>>>
>>> The book says 610 ohms at my voltage. So would I use a pair of 1200
>>> ohm resistors in this case?
>>>
>>> My logic is since there is not a separate cathode then the two R in
>>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>>
>>> TIA and Merry Christmas,
>>>
>>> Bill
>>
>> (Disclaimer -- I haven't done this. It's just knowledge gotten from
>> lots of books, and lots of solid-state circuit design experience).
>>
>> No, because all the filament voltage will go to mildly heating up the
>> resistors, and none will go to wildly heating up the filament.
>>
>> Use a center-tapped filament transformer, and put the 600 ohm resistor
>> between its center tap and ground. If necessary, use a separate
>> transformer just for the 1624s.
>>
> If his un-centertapped filament winding is ONLY supplying that one tube
> and he has each leg going to ground through a 1200 ohm resistor that
> would result in a 600 ohm connection to ground. So it should work.
> Remember that's 2400 ohms across the filament, it won't suck up much
> heater current at all.

Sorry. I was visualizing the 1200 ohms each in series with the
transformer, whose center tap is grounded.

Of course the alternate way makes perfect sense.

And here it is too late to ask Santa for more brains for Christmas.

--

Tim Wescott
Wescott Design Services

http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

# 2266. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 01:44:08 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <LFW4l.177$em5.61@newsfe22.iad>
Source record: 3353

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:h4R4l.13210$UI2.4658@bignews6.bellsouth.net...
> raypsi wrote:
>> On Dec 25, 12:46 pm, raypsi <RBorow...@gmail.com> wrote:
>>> On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
>>>
>>>> I'm a little confused again.
>>>> Setting up a 1624 tube for cathode biasing and also need to create a
>>>> center tap for keying to ground.
>>>> The book says 610 ohms at my voltage. So would I use a pair of 1200
>>>> ohm
>>>> resistors in this case?
>>>> My logic is since there is not a separate cathode then the two R in
>>>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>>> TIA and Merry Christmas,
>>>> Bill
>>> hey OM:
>>>
>>> Exactly and you will need at least 10 watts of resistors to be safe.
>>> Because they also will have to handle plate, grid1, grid2, and the
>>> current they draw across the filament. I suppose if they where wire
>>> wound like 25 watt you could stick a ferrite rod in their hole and
>>> make them your filament chokes also. But if you use carbon comp
>>> resistors then part of your drive will go heating those resistors, so
>>> not much gain going on there.
>>>
>>> 73 OM
>>> n8zu
>>
>> Well they ain't filament chokes, but in the drive circuit the drive
>> signal won't go to heating them up if they are chokes. So they will
>> only be taking about 1 mil of current from the filament circuit.
>>
>> 73
>> n8zu
> One possible problem. If this is an RF amplifier circuit you probably
> want to use NON-INDUCTIVE resistors in the circuit or they WILL act as
> chokes!

Would that make a difference? I'd also assume there's two RF cathode
bypass caps in there; otherwise the circuit would be extremely
degenerative.

Pete

# 2267. Re: Rig Response 3 , expected 38

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 16:57:54 UTC
From: fazamy <fazamy@aol.com>
Message-ID: <17f4ebde-58e1-4617-b0e2-fb790612188a@v42g2000yqj.googlegroups.com>
Source record: 3354

```
On Dec 25, 1:36 pm, raypsi <RBorow...@gmail.com> wrote:
> On Dec 22, 5:08 pm, Allodoxaphobia <bit-buc...@config.com> wrote:
>
>
>
> > On Mon, 22 Dec 2008 16:34:26 +0000, Stray Dog wrote:
> > > On Sun, 21 Dec 2008, fazamy wrote:
>
> > >> Date: Sun, 21 Dec 2008 21:32:55 -0800 (PST)
> > >> From: fazamy <faz...@aol.com>
> > >> Newsgroups: rec.radio.amateur.homebrew
> > >> Subject: Rig Response 3 , expected 38
>
> > >> I've posted this on the  XmLog group without a response explaining the
> > >> meaning of this message:  "Rig Response 3 , expected 38." Attempting
> > >> to configure a so-called virtual com port from a freeware program so
> > >> that I can run that log software on a discrete port, I get that
> > >> message.  What is 3?  And if 38 is the optimal figure, how do I get to
> > >> 38?
>
> > >> Is there nyone in this group who can explain this?
>
> > > It would help if you listed critical details like:
>
> > > 1. what is the name of the application.
> > > 2. its version number.
> > > 3. whether the documentation specifies what kind of operating system it
> > >    needs, what kind of hardware is a pre-requisit. And, whether there
> > >    is a "readme" file with description of issues.
> > > 4. what OS you actually are using.
> > > 5. whether you attempted to contact the source of the software for an
> > >    answer.
> > > 6. whether the com port is specifiable from the software.
> > > 7. does the com port hardware actually exist and correspond to what is
> > >    configurable from the software.
> > > 8. and out of curiosity, what is supposed to go in or out of the com port
> > >    in this "logging" software? And, what is it supposed to connect with?
> > > 9. did you buy the software or get it from someone else who has it
> > >    working? (ask them for help?).
>
> > > That is for starters.
>
> > Really?
>
```

> >  0.5. What does this have to do with homebrew?
>
> hey OM:
>
> Well you have to be desperate to ask what does it have to do with
> homebrew?
> When you should have asked: what does it have to do with amateur radio
> homebrew?
>
> But this ham needs is support. Not condescending attitudes. His first
> problem is he gots Windoz.
> The second trouble is that's like freeware. You gits no support.
>
> A whois lookup of xmlog.com I finds this information:
>
> Administrative Contact:
>       McAmis, Mike              m.mca...@VALLEY.NET
>       Blat
>       433 Hanover Center Road
>       Etna, NH 03750
>       US
>       603-643-4361 fax: 603-643-4217
>
> Now that FAX number is sum church. So whether you can gits ahold of
> Mike at the phone number listed as his registrar contact, you might
> end up on a wild goose chase.
> Maybe you should try emailing mike.
>
> It's obvious what that means, the freeware  is looking for a 38 and
> your rig is telling the freeware 3.  Your'e set up for the wrong rig.
> You have to go into the settings and find what rig is listed as 3 and
> set the sittings for that rig.
>
> Towit it's like you set it up for say a 706MkII when you should have
> set it up for a 706MkIIG.
>
> Now if you can't figure it out then you are going to have to try them
> all twice. The second times always the charm.
>
> good luck on straight key night.
>
> 73 OM
> n8zu

Dear OM,
TU. An original post was on the XMLog group and it took a long while,
in my estimate, to get a response. However, I got a couple of
suggestions and an explanation which involved the sending of ASCII
characters.

I don't mind asking questions that might be perceived as dumb. (Just look at my history of posts to various groups. Many years ago I created quite a stir when I asked a question about a Beverage antenna, hi hi.)

So, to all the helpful and compassionate Ops, thank you very much. Over the years, I received a lot of help from the many groups on which I posted.

73,
Evan

# 2268. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 17:46:32 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <tl85l.12819$M01.10000@bignews3.bellsouth.net>
Source record: 3355

Tio Pedro wrote:
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:h4R4l.13210$UI2.4658@bignews6.bellsouth.net...
>> raypsi wrote:
>>> On Dec 25, 12:46 pm, raypsi <RBorow...@gmail.com> wrote:
>>>> On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
>>>>
>>>>> I'm a little confused again.
>>>>> Setting up a 1624 tube for cathode biasing and also need to create a
>>>>> center tap for keying to ground.
>>>>> The book says 610 ohms at my voltage. So would I use a pair of 1200
>>>>> ohm
>>>>> resistors in this case?
>>>>> My logic is since there is not a separate cathode then the two R in
>>>>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>>>> TIA and Merry Christmas,
>>>>> Bill
>>>> hey OM:
>>>>
>>>> Exactly and you will need at least 10 watts of resistors to be safe.
>>>> Because they also will have to handle plate, grid1, grid2, and the
>>>> current they draw across the filament. I suppose if they where wire
>>>> wound like 25 watt you could stick a ferrite rod in their hole and
>>>> make them your filament chokes also. But if you use carbon comp
>>>> resistors then part of your drive will go heating those resistors, so
>>>> not much gain going on there.
>>>>
>>>> 73 OM
>>>> n8zu
>>> Well they ain't filament chokes, but in the drive circuit the drive
>>> signal won't go to heating them up if they are chokes. So they will
>>> only be taking about 1 mil of current from the filament circuit.
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>>> 73
>>> n8zu
>> One possible problem. If this is an RF amplifier circuit you probably
>> want to use NON-INDUCTIVE resistors in the circuit or they WILL act as
>> chokes!
>
> Would that make a difference? I'd also assume there's two RF cathode
> bypass caps in there; otherwise the circuit would be extremely
> degenerative.
>
> Pete

>
>
So long as the inductance of the resistors doesn't resonate with the
bypass capacitors at some frequency of interest.

# 2269. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 18:08:49 UTC
From: Bill M <radioexray@geemail.com>
Message-ID: <gj36ji12sfk@news7.newsguy.com>
Source record: 3356

ken scharf wrote:

> So long as the inductance of the resistors doesn't resonate with the
> bypass capacitors at some frequency of interest.

Thanks for all the tips, guys.

-Bill

# 2270. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 18:19:27 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Te95l.7625$mE3.3205@newsfe14.iad>
Source record: 3357

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:tI85l.12819$M01.10000@bignews3.bellsouth.net...
> Tio Pedro wrote:
>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>> news:h4R4l.13210$UI2.4658@bignews6.bellsouth.net...
>>> raypsi wrote:
>>>> On Dec 25, 12:46 pm, raypsi <RBorow...@gmail.com> wrote:
>>>>> On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
>>>>>
>>>>>> I'm a little confused again.
>>>>>> Setting up a 1624 tube for cathode biasing and also need to create a
>>>>>> center tap for keying to ground.
>>>>>> The book says 610 ohms at my voltage. So would I use a pair of 1200
>>>>>> ohm
>>>>>> resistors in this case?
>>>>>> My logic is since there is not a separate cathode then the two R in
>>>>>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>>>>> TIA and Merry Christmas,
>>>>>> Bill
>>>>> hey OM:
>>>>>
>>>>> Exactly and you will need at least 10 watts of resistors to be safe.
>>>>> Because they also will have to handle plate, grid1, grid2, and the
>>>>> current they draw across the filament. I suppose if they where wire
>>>>> wound like 25 watt you could stick a ferrite rod in their hole and
>>>>> make them your filament chokes also. But if you use carbon comp
>>>>> resistors then part of your drive will go heating those resistors, so
>>>>> not much gain going on there.
>>>>>
>>>>> 73 OM
>>>>> n8zu
>>>> Well they ain't filament chokes, but in the drive circuit the drive
>>>> signal won't go to heating them up if they are chokes. So they will
>>>> only be taking about 1 mil of current from the filament circuit.
>>>>
>>>> 73
>>>> n8zu
>>> One possible problem. If this is an RF amplifier circuit you probably
>>> want to use NON-INDUCTIVE resistors in the circuit or they WILL act as
>>> chokes!
>>
>> Would that make a difference? I'd also assume there's two RF cathode
>> bypass caps in there; otherwise the circuit would be extremely
>> degenerative.

>>
>> Pete
> So long as the inductance of the resistors doesn't resonate with the
> bypass capacitors at some frequency of interest.

But would the impedance ever be lower than the ohmic resistance
for the resistor?

# 2271. Re: Free downloads for life

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 18:24:04 UTC
From: joeturn <joeturn2000@yahoo.com>
Message-ID: <4e8ac39e-84c9-49fb-8dd6-bed4f988d80f@h20g2000yqn.googlegroups.com>
Source record: 3358
Body handling: HTML body converted to readable text

This means pokerrng 7, pocket aces, all the bots , and every file
that hits the internet,plus music& videos to members for free!! Now
heres the christmas special $5.00 usualy is good for only three days
but if
you sign up now, the $5.00 will be for a life time membership! Soo
Merry
christmas from me

# 2272. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 19:10:27 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <8X95l.12843$M01.7177@bignews3.bellsouth.net>
Source record: 3368

Tio Pedro wrote:
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:tI85l.12819$M01.10000@bignews3.bellsouth.net...
>> Tio Pedro wrote:
>>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>>> news:h4R4l.13210$UI2.4658@bignews6.bellsouth.net...
>>>> raypsi wrote:
>>>>> On Dec 25, 12:46 pm, raypsi <RBorow...@gmail.com> wrote:
>>>>>> On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
>>>>>>
>>>>>>> I'm a little confused again.
>>>>>>> Setting up a 1624 tube for cathode biasing and also need to create a
>>>>>>> center tap for keying to ground.
>>>>>>> The book says 610 ohms at my voltage. So would I use a pair of 1200
>>>>>>> ohm
>>>>>>> resistors in this case?
>>>>>>> My logic is since there is not a separate cathode then the two R in
>>>>>>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>>>>>> TIA and Merry Christmas,
>>>>>>> Bill
>>>>>> hey OM:
>>>>>>
>>>>>> Exactly and you will need at least 10 watts of resistors to be safe.
>>>>>> Because they also will have to handle plate, grid1, grid2, and the
>>>>>> current they draw across the filament. I suppose if they where wire
>>>>>> wound like 25 watt you could stick a ferrite rod in their hole and
>>>>>> make them your filament chokes also. But if you use carbon comp
>>>>>> resistors then part of your drive will go heating those resistors, so
>>>>>> not much gain going on there.
>>>>>>
>>>>>> 73 OM
>>>>>> n8zu
>>>>> Well they ain't filament chokes, but in the drive circuit the drive
>>>>> signal won't go to heating them up if they are chokes. So they will
>>>>> only be taking about 1 mil of current from the filament circuit.
>>>>>
>>>>> 73
>>>>> n8zu
>>>> One possible problem. If this is an RF amplifier circuit you probably
>>>> want to use NON-INDUCTIVE resistors in the circuit or they WILL act as
>>>> chokes!
>>> Would that make a difference? I'd also assume there's two RF cathode
>>> bypass caps in there; otherwise the circuit would be extremely
>>> degenerative.

>>>
>>> Pete
>> So long as the inductance of the resistors doesn't resonate with the
>> bypass capacitors at some frequency of interest.
>
> But would the impedance ever be lower than the ohmic resistance
> for the resistor?
>
>
It would be an inductor with very low Q.

## 2273. Re: Directly heated tube, cathode bias

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-26 21:17:54 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <9Sb5l.6636$an4.5324@newsfe08.iad>
Source record: 3369

```
"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:8X95l.12843$M01.7177@bignews3.bellsouth.net...
> Tio Pedro wrote:
>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>> news:tI85l.12819$M01.10000@bignews3.bellsouth.net...
>>> Tio Pedro wrote:
>>>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>>>> news:h4R4l.13210$UI2.4658@bignews6.bellsouth.net...
>>>>> raypsi wrote:
>>>>>> On Dec 25, 12:46 pm, raypsi <RBorow...@gmail.com> wrote:
>>>>>>> On Dec 24, 8:58 pm, Bill M <radioex...@geemail.com> wrote:
>>>>>>>
>>>>>>>> I'm a little confused again.
>>>>>>>> Setting up a 1624 tube for cathode biasing and also need to create
>>>>>>>> a
>>>>>>>> center tap for keying to ground.
>>>>>>>> The book says 610 ohms at my voltage. So would I use a pair of
>>>>>>>> 1200 ohm
>>>>>>>> resistors in this case?
>>>>>>>> My logic is since there is not a separate cathode then the two R in
>>>>>>>> parallel would raise the filament 'cathode' 600 ohms above B-minus.
>>>>>>>> TIA and Merry Christmas,
>>>>>>>> Bill
>>>>>>> hey OM:
>>>>>>>
>>>>>>> Exactly and you will need at least 10 watts of resistors to be safe.
>>>>>>> Because they also will have to handle plate, grid1, grid2, and the
>>>>>>> current they draw across the filament. I suppose if they where wire
>>>>>>> wound like 25 watt you could stick a ferrite rod in their hole and
>>>>>>> make them your filament chokes also. But if you use carbon comp
>>>>>>> resistors then part of your drive will go heating those resistors,
>>>>>>> so
>>>>>>> not much gain going on there.
>>>>>>>
>>>>>>> 73 OM
>>>>>>> n8zu
>>>>>> Well they ain't filament chokes, but in the drive circuit the drive
>>>>>> signal won't go to heating them up if they are chokes. So they will
>>>>>> only be taking about 1 mil of current from the filament circuit.
>>>>>>
>>>>>> 73
>>>>>> n8zu
>>>>> One possible problem. If this is an RF amplifier circuit you probably
>>>>> want to use NON-INDUCTIVE resistors in the circuit or they WILL act as
```

>>>>> chokes!
>>>> Would that make a difference? I'd also assume there's two RF cathode
>>>> bypass caps in there; otherwise the circuit would be extremely
>>>> degenerative.
>>>>
>>>> Pete
>>> So long as the inductance of the resistors doesn't resonate with the
>>> bypass capacitors at some frequency of interest.
>>
>> But would the impedance ever be lower than the ohmic resistance
>> for the resistor?
>>
>>
> It would be an inductor with very low Q.

Yes, but it is still Hi Z, the resistive portion
is in series with the inductive reactance.

Pete

## 2274. You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 02:36:32 UTC
From: no <no@no.com>
Message-ID: <Nwg5l.11115$x%.1336@nlpi070.nbdc.sbc.com>
Source record: 3371

He notices that the digital display on your dash is a clock set to GMT.

# 2275. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 03:36:33 UTC
From: Bill M <radioexray@geemail.com>
Message-ID: <gj47s30um9@news3.newsguy.com>
Source record: 3372

no wrote:
> He notices that the digital display on your dash is a clock set to GMT.
>
>
Haha...

I have a similar story. I was at our local medical GP's office for something and his cellphone started beeping CW. It spelled out the call letters and said the name of the company (I've never heard cellfones do that) and I said "Oh, it just said 'KJH123 Verizon Com'" or whatever it was.

He gave me the strangest look!

I said, 'I mean your cellfone, it just sent something in Morse code'.

He gave me the strange look again and says 'Uh, mmm-kay'.

-Bill

## 2276. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 09:24:28 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.12.27.09.24.28.747909@localhost.localdomain>
Source record: 3375

On Fri, 26 Dec 2008 20:36:32 -0600, no wrote:

> He notices that the digital display on your dash is a clock set to GMT.

Good one!

# 2277. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 09:25:52 UTC
From: geek <geek@localhost.localdomain>
Message-ID: <pan.2008.12.27.09.25.51.311061@localhost.localdomain>
Source record: 3376

On Fri, 26 Dec 2008 23:36:33 -0400, Bill M wrote:

> no wrote:
>> He notices that the digital display on your dash is a clock set to GMT.
>>
>>
> Haha...
>
> I have a similar story. I was at our local medical GP's office for
> something and his cellphone started beeping CW. It spelled out the call
> letters and said the name of the company (I've never heard cellfones do
> that) and I said "Oh, it just said 'KJH123 Verizon Com'" or whatever it was.
>
> He gave me the strangest look!
>
> I said, 'I mean your cellfone, it just sent something in Morse code'.
>
> He gave me the strange look again and says 'Uh, mmm-kay'.
>
> -Bill

Ooooh, we can get CW ringtones? I'm in!

## 2278. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 14:59:07 UTC
From: philo <philo@privacy.net>
Message-ID: <0sSdndsReO5T3MvUnZ2dnUVZ_rXinZ2d@ntd.net>
Source record: 3379

"geek" <geek@localhost.localdomain> wrote in message
news:pan.2008.12.27.09.24.28.747909@localhost.localdomain...
> On Fri, 26 Dec 2008 20:36:32 -0600, no wrote:
>
> > He notices that the digital display on your dash is a clock set to GMT.
>
> Good one!

Even worse is if the guy has a WWV implant
and notices that the clock is off by a second!

## 2279. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 15:10:10 UTC
From: JB <nospam@goofball.net>
Message-ID: <mzr5l.1363$BC4.1323@nwrddc02.gnilink.net>
Source record: 3380

"geek" <geek@localhost.localdomain> wrote in message
news:pan.2008.12.27.09.25.51.311061@localhost.localdomain...
> On Fri, 26 Dec 2008 23:36:33 -0400, Bill M wrote:
>
> > no wrote:
> >> He notices that the digital display on your dash is a clock set to GMT.
> >>
> >>
> > Haha...
> >
> > I have a similar story. I was at our local medical GP's office for
> > something and his cellphone started beeping CW. It spelled out the call
> > letters and said the name of the company (I've never heard cellfones do
> > that) and I said "Oh, it just said 'KJH123 Verizon Com'" or whatever it
was.
> >
> > He gave me the strangest look!
> >
> > I said, 'I mean your cellfone, it just sent something in Morse code'.
> >
> > He gave me the strange look again and says 'Uh, mmm-kay'.
> >
> > -Bill
>
> Ooooh, we can get CW ringtones? I'm in!

If only you could get it to interface with caller ID.

# 2280. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 16:37:46 UTC
From: joeturn <joeturn2000@yahoo.com>
Message-ID: <7a5d33ec-770d-445e-884f-d4de71e1281b@o4g2000pra.googlegroups.com>
Source record: 3401

Service manuals are hard to come by anymore but I'll bet this guy can fix you right up!

http://www.qsl.net/ka2pyj/pro2011.htm

I have a pro 2096 I bought off ebay for $50.00 as a tech special guaranteed to be DOA

I shiped it to rat shack and they returned it saying parts no longer available now I'm at $84.00 and counting!

I found on fixya, a problem with the ribbon connections but the tech said the 103 pin chip was shorted!!

I refuse to believe that as it was one of the first batch that could be modified to no gap status!! ! Now what shall I do??

## 2281. Re: Big Boobs on Parade

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 17:03:14 UTC
From: joeturn <joeturn2000@yahoo.com>
Message-ID: <a4ca7bd2-83b9-4c4a-a3e7-eea10cd152cc@o4g2000pra.googlegroups.com>
Source record: 3402
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.running,rec.scouting.issues

http://redtube.com/ I like this one better

## 2282. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 17:20:39 UTC
From: Garry W Tidler <gtidler@bluemarble.net>
Message-ID: <495663f2$0$3714$39cecf19@news.twtelecom.net>
Source record: 3403

CW ring tones

click here > http://www.planetofnoise.com/midi/morse2mid.php <click
here

Garry WW9GT

# 2283. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 18:35:36 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812271823530.7863@sdf.lonestar.org>
Source record: 3406

On Sat, 27 Dec 2008, joeturn wrote:

> Date: Sat, 27 Dec 2008 08:37:46 -0800 (PST)
> From: joeturn <joeturn2000@yahoo.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: Radio Shack Pro 2011 scanner schematic
>
> Service manuals are hard to come by anymore but I'll bet this guy can
> fix you right up!
>
> http://www.qsl.net/ka2pyj/pro2011.htm
>
> I have a pro 2096 I bought off ebay for $50.00 as a tech special
> guaranteed to be DOA
>
> I shiped it to rat shack and they returned it saying parts no longer
> available now I'm at $84.00 and counting!
>
> I found on fixya, a problem with the ribbon connections but the tech
> said the 103 pin chip was shorted!!
>
> I refuse to believe that as it was one of the first batch that could
> be modified to no gap status!! ! Now what shall I do??

There are guys who will go to the limits to repair DOA gear.

Maybe some other guys here will encourage you with suggestions. My suggestion is, unless there are some very unique technical specifications that you really need, to cut your losses up to this point and buy something that you have a high probability expectation will work, out of the box, and has some warranty protection (which usually means they may just give you a new device instead of fixing the old one).

I know someone who is working on a dead ham transceiver, all solid state and major ricebox brand, who has already spent enormous numbers of hours with little progress and with the full knowledge that most of the chips and sub-assemblies are no longer available or supported by the company.

We have been in this "new" throw-away economy evern since chips started coming out where the technology understandably must progress in a manner that automatically makes obsolete the prior generation of technology for the purpose of causing ownership of capabilities to be more expensive than if the older technology were made repairable.

# 2284. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 21:05:10 UTC
From: JB <nospam@goofball.net>
Message-ID: <aMw5l.1422$BC4.186@nwrddc02.gnilink.net>
Source record: 3407

Bitchin'
"Garry W Tidler" <gtidler@bluemarble.net> wrote in message
news:495663f2$0$3714$39cecf19@news.twtelecom.net...
>
> CW ring tones
> click here > http://www.planetofnoise.com/midi/morse2mid.php <click
> here
>
>
> Garry WW9GT
>

# 2285. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 21:43:21 UTC
From: joeturn <joeturn2000@yahoo.com>
Message-ID: <f2ff4555-35d9-419f-81ac-1fdd49298dcf@v4g2000yqa.googlegroups.com>
Source record: 3410

Throw aways:
Actually I saw that coming about 20 years ago with the works in a
drawer by magnovox.
I ordered a surface mount hearing kit from Ramsey!! Had to use a
toothpic and super glue the components into place before I could
solder them! Back then the flex monuted magnifier was saficient,
now ,it requires a jewlers loop to see them!!..
However GRE should have offered to fix mine as it was the GRE
400/500 .They never answered my email??
Oh well I'll catch someone who wants to tinker or find a junk one in a
pawn shop??

## 2286. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 22:05:52 UTC
From: nobody <nobody@nowhere.com>
Message-ID: <4956A6C0.5000306@nowhere.com>
Source record: 3411

> 
> If only you could get it to interface with caller ID.

I have not tried it yet as I don't want others to know who's calling me,
but on my Ericsson P1 I can choose personal ringtones so it would be
possible to connect a CW-call to someone in my phone-book.

/L

# 2287. Re: FA: MOPA 2-Tube Transmitter Instant Junkbox parts assortment

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 23:19:32 UTC
From: terryS <tsanford@nf.sympatico.ca>
Message-ID: <ba5af0b0-d0d2-4273-af7e-8cde7c5ab52a@j38g2000yqa.googlegroups.com>
Source record: 3412
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Dec 13, 3:49 pm, mjsi...@embarqmail.com wrote:
> On Dec 12, 6:09 pm, "Theo" <theodore.twy...@ntlworld.com> wrote:
>
>
>
>
>
> > <mjsi...@embarqmail.com> wrote in message
>
> >news:ab4948f6-89a2-4ae9-b128-31740dc76fde@k24g2000pri.googlegroups.com...
> > On Dec 11, 3:58 pm, raypsi <RBorow...@gmail.com> wrote:
>
> > > On Dec 8, 12:07 pm, mjsi...@embarqmail.com wrote:
>
> > > > I had this idea a while back, to thin out my stuff in what I think is
> > > > a useful and interesting way. Along the way I ended up having to buy
> > > > a bunch of new stuff as well (e.g. the brand new tune and load
> > > > variable caps). So take a look - might be a fun way to spend some
> > > > winter evenings.
>
> > > >http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=160303721771
>
> > > > 73,
> > > > Mike, KK6GM
>
> > > Hey OM
>
> > > I should has learned to play the guitar. Instead I got into
> > > electronics built my first xmitter in '67 using a 6BQ5 xtal osc and
> > > 6146A final.
> > > Everything was hot. I used series twist lock caps in the ps, B&W coil,
> > > with aligator clip adjust, multi elmac plate and tune caps, a tv set
> > > power xformer, all that on a punched out 5x7x2 LMB chassis. Even the
> > > Key was hot as I keyed the screen of the 6146A.
>
> > > 73 OM
> > > n8zu
>
> > That's pretty impressive, fitting that on a 5x7 chassis!
>
> > (Actually 5ft x 7ft !)  ;-)- Hide quoted text -
>
> > - Show quoted text -

>
> You mean kinda like this?
>
> http://i408.photobucket.com/albums/pp169/snarflemike/SCAN0006.jpg- Hide quoted text -
>
> - Show quoted text -

Hey. Notice how everyone in that picture is wearing a tie? The guy on
the left is wearing a bow tie, I thnk? Proper dressing; these days we
are too sloppy; eh? Cheers.

## 2288. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-27 23:27:59 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <cPy5l.13286$YU6.1668@bignews8.bellsouth.net>
Source record: 3416

no wrote:
> He notices that the digital display on your dash is a clock set to GMT.
>
>
You mean "you know your passenger is a ham when ..."
If he were a geek, the clock would read out in BINARY (or Hexadecimal).

# 2289. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 00:59:07 UTC
From: Stray Dog <sdog2008@sdf.lonestar.org>
Message-ID: <Pine.NEB.4.64.0812280049040.6443@sdf.lonestar.org>
Source record: 3417

On Sat, 27 Dec 2008, joeturn wrote:

> Date: Sat, 27 Dec 2008 13:43:21 -0800 (PST)
> From: joeturn <joeturn2000@yahoo.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: Radio Shack Pro 2011 scanner schematic
>
> Throw aways:
> Actually I saw that coming about 20 years ago with the works in a
> drawer by magnovox.
> I ordered a surface mount hearing kit from Ramsey!! Had to use a
> toothpic and super glue the components into place before I could
> solder them! Back then the flex monuted magnifier was saficient,
> now ,it requires a jewlers loop to see them!!..
> However GRE should have offered to fix mine as it was the GRE
> 400/500 .They never answered my email??
> Oh well I'll catch someone who wants to tinker or find a junk one in a
> pawn shop??
>

Well, there has been a lot of useful technical progress but I am a little bit bothered by this trend to _also_ (besides not being able to fix anything because it is 'throw away") the trend to make stuff so that it actually has to be fixed by bringing the unit in for some kind of aftermarket repair, adjustment, etc., and it costs some money in addition to the inconvienience.

Cell phone viruses, for example, are known and the stories say they are already out there (one will drain your battery on you), and, so as we get more web access via PDA-type devices, what do you do if your thing starts acting up? Go to a URL and download a "fix" and if the virus fixes it so you can 't do that, then you have to send in your whole thing with $100 or so to have _them_ fix it? This is about what it's going to start taking soon.

## 2290. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 08:19:53 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <bd4a7fa6-97af-4485-8330-e6a7b932e6b2@h5g2000yqh.googlegroups.com>
Source record: 3425

On Dec 26, 10:36 pm, Bill M <radioex...@geemail.com> wrote:
>
> I said, 'I mean your cellfone, it just sent something in Morse code'.
>
> He gave me the strange look again and says 'Uh, mmm-kay'.
>
> -Bill
Hey OM:
The messages on my cell are sent in CW. I used it just for work. My
boss sent her phone number and it came to me in CW on my phone. My
phone was a refurb. so I don't know how they did it. I've searched for
that program but to no avail.

73 OM
n8zu

# 2291. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 20:50:00 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <025ac844-dff2-4328-ad0f-1d63f8dac768@r24g2000vbp.googlegroups.com>
Source record: 3428

On Dec 27, 11:37 am, joeturn <joeturn2...@yahoo.com> wrote:
> Service manuals are hard to come by anymore but I'll bet this guy can
> fix you right up!
>
> http://www.qsl.net/ka2pyj/pro2011.htm
>
> I have a pro 2096 I bought off ebay for $50.00 as a tech special
> guaranteed to be DOA
>
> I shiped it to rat shack and they returned it saying parts no longer
> available now I'm at $84.00 and counting!
>
> I found on fixya, a problem with the ribbon connections but the tech
> said the 103 pin chip was shorted!!
>
> I refuse to believe that as it was one of the first batch that could
> be modified to no gap status!! ! Now what shall I do??

Thanks but I tried him already , my email got bounced. That account no
longer exist.

Most of the frequency blocking is done iin the uP board. If this can
be bypassed using a PC interface you are in business.
Interfaces to replace the uP board have been built around a PIC but I
have almost zero experience with a PIC.

Jimmie

# 2292. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 21:05:37 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <b8281002-9ece-4016-8b0b-a4bfdb4b9b6d@l16g2000yqo.googlegroups.com>
Source record: 3429

On Dec 27, 6:27 pm, ken scharf <wa2mzeNOSPAMB...@bellsouth.net> wrote:
> no wrote:
> > He notices that the digital display on your dash is a clock set to GMT.
>
> You mean "you know your passenger is a ham when ..."
> If he were a geek, the clock would read out in BINARY (or Hexadecimal).

I worked on mainframe computer systems for 27 years and had a BCD
clock with neon lamp display, the counters used 12AX7s. It ran on my
desk for years and one of the new guys had built one using 74 seies
ICs. He just could not believe it the day he saw me changing tubes in
my clock.

Jimmie

# 2293. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 21:11:35 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <a7dc32f0-5dec-4649-901d-134c17aa4061@e6g2000vbe.googlegroups.com>
Source record: 3430

On Dec 28, 3:19 am, raypsi <RBorow...@gmail.com> wrote:
> On Dec 26, 10:36 pm, Bill M <radioex...@geemail.com> wrote:
>
> > I said, 'I mean your cellfone, it just sent something in Morse code'.
>
> > He gave me the strange look again and says 'Uh, mmm-kay'.
>
> > -Bill
>
> Hey OM:
> The messages on my cell are sent in CW. I used it just for work. My
> boss sent her phone number and it came to me in CW on my phone. My
> phone was a refurb. so I don't know how they did it. I've searched for
> that program but to no avail.
>
> 73 OM
> n8zu

Years ago I was hooked up to some medical gear that beeped a CW ON or
OFF.with corresponding state change.

Jimmie

# 2294. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 21:16:02 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <86166b1a-8cdc-4098-b267-d2b3e7df588a@a29g2000pra.googlegroups.com>
Source record: 3431

On Dec 26, 9:36 pm, "no" <n...@no.com> wrote:
> He notices that the digital display on your dash is a clock set to GMT.

My daughter must think Im a geek, She gave me a "Fibonacci as easy as
1,1,2,3,....." T shirt for Xmas.

Jimmie

# 2295. RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 21:41:23 UTC
From: lagagnon <lagagnon@gmail.com>
Message-ID: <738b45fe-43d6-44b1-b643-35c437815d64@w1g2000prm.googlegroups.com>
Source record: 3432

I need to make some trimmer cap replacements to an IC-735 and then do a PL adjustment after replacing them. To do this properly (according to the service manual) I need an RF voltmeter capable of measuring the range of 40-400mV.

I have a DMM with an input impedance of 10M ohms. I was hoping to construct a simple RF probe to the DMM and thus measure RF volts. However, the way I understand it, most of the suggested RF probe schematics (eg - the one in the ARRL Handbook) would only work in the range of volts, rather than millvolts, due to the voltage drop on the detector diode.

I have found a solution in the RSGB "Test Equipment for the Radio Amateur" book, which unfortunately requires building 4 transistor array to amplify the signal. A bit more work than I want to get involved in unless necessary!

So my question is if anyone knows of a simpler solution for an RF probe that can measure RF millivolts without an amplifier array?

Any suggestions greatly appreciated.

Larry VE7EA

## 2296. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 22:00:55 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <zGS5l.38388$sC4.12117@newsfe04.iad>
Source record: 3433

Well, the old Boonton RF millivolters are dirt cheap these days...

Do you have a good scope on hand? Something along the lines
of more modern Tektronix? That would be the easiest way to
do it. You can make a cheap RF probe using a hot carrier diode
or germanium diode, but the reading accuracy would be
questionable, especially at very low RF voltage levels.

# 2297. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-28 22:44:52 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <MjT5l.18455$ly1.1@newsfe19.iad>
Source record: 3434

Are you looking for a peak while tuning, a relative indication?
Or, do you need to know the exact RF voltage level?

Pete

# 2298. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 00:39:29 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <27a2de99-a7c5-4499-88d4-90ffde352f61@v4g2000vbb.googlegroups.com>
Source record: 3435

On Dec 27, 1:35 pm, Stray Dog <sdog2...@sdf.lonestar.org> wrote:
> On Sat, 27 Dec 2008, joeturn wrote:
> > Date: Sat, 27 Dec 2008 08:37:46 -0800 (PST)
> > From: joeturn <joeturn2...@yahoo.com>
> > Newsgroups: rec.radio.amateur.homebrew
> > Subject: Re: Radio Shack Pro 2011 scanner schematic
>
> > Service manuals are hard to come by anymore but I'll bet this guy can
> > fix you right up!
>
> >http://www.qsl.net/ka2pyj/pro2011.htm
>
> > I have a pro 2096 I bought off ebay for $50.00 as a tech special
> > guaranteed to be DOA
>
> > I shiped it to rat shack and they returned it saying parts no longer
> > available now I'm at $84.00 and counting!
>
> > I found on fixya, a problem with the ribbon connections but the tech
> > said the 103 pin chip was shorted!!
>
> > I refuse to believe that as it was one of the first batch that could
> > be modified to no gap status!! ! Now what shall I do??
>
> There are guys who will go to the limits to repair DOA gear.
>
> Maybe some other guys here will encourage you with suggestions. My
> suggestion is, unless there are some very unique technical specifications
> that you really need, to cut your losses up to this point and buy
> something that you have a high probability expectation will work, out of
> the box, and has some warranty protection (which usually means they may
> just give you a new device instead of fixing the old one).
>
> I know someone who is working on a dead ham transceiver, all solid state
> and major ricebox brand, who has already spent enormous numbers of hours
> with little progress and with the full knowledge that most of the chips
> and sub-assemblies are no longer available or supported by the company.
>
> We have been in this "new" throw-away economy evern since chips started
> coming out where the technology understandably must progress in a manner
> that automatically makes obsolete the prior generation of technology for
> the purpose of causing ownership of capabilities to be more expensive than
> if the older technology were made repairable.- Hide quoted text -
>

> - Show quoted text -

Things like the PRO 2011 are fun to repair. It was built before chip componets.

Jimmie

## 2299. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 00:58:28 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <00278a4d-f14e-49f5-9cb3-b5113424e93c@r15g2000prd.googlegroups.com>
Source record: 3436

On Dec 28, 1:41 pm, lagagnon <lagag...@gmail.com> wrote:
> I need to make some trimmer cap replacements to an IC-735 and then do
> a PL adjustment after replacing them. To do this properly (according
> to the service manual) I need an RF voltmeter capable of measuring
> the range of 40-400mV.
>
> I have a DMM with an input impedance of 10M ohms. I was hoping to
> construct a simple RF probe to the DMM and thus measure RF volts.
> However, the way I understand it, most of the suggested RF probe
> schematics (eg - the one in the ARRL Handbook) would only work in the
> range of volts, rather than millvolts, due to the voltage drop on the
> detector diode.
>
> I have found a solution in the RSGB "Test Equipment for the Radio
> Amateur" book, which unfortunately requires building 4 transistor
> array to amplify the signal. A bit more work than I want to get
> involved in unless necessary!
>
> So my question is if anyone knows of a simpler solution for an RF
> probe that can measure RF millivolts without an amplifier array?
>
> Any suggestions greatly appreciated.
>
> Larry VE7EA

It's a common misconception that detector diodes (or any other
semiconductor diodes, for that matter) don't turn on at all below some
magic voltage. That's a lie! The conduction current versus bias
voltage is a smooth curve that passes through 0 current at 0 volts
(assuming you don't have light falling on the junction ;-), but
there's more conduction at +1 millivolt than there is a -1 millivolt.
I've built single diode detectors that I've used to detect RF as low
as about 100 MICROvolts. It's QUITE EASY to see the output for a 40
millivolt input even if you use a cheap 1N4148 silicon diode as a
detector and a not very fancy DVM to read it out. Try it! The thing
is, the output at low voltages will be a voltage that is linearly
proportional to the _square_ of the input voltage. That transitions
to being linear with input voltage as you get to RF voltages in the
range of "one diode drop," or about half a volt for standard silicon
diodes. That square thing means sensitivity drops rapidly as you get
to low RF voltages: cut the RF in half and the DC output drops to 1/4
what it was.

If you can get an RF Schottky diode, or a germanium detector diode,
you'll have greater sensitivity, but if your volt meter goes down to

below a millivolt (e.g., a 3-1/2 digit DVM with a 200mV range), you should be able to easily see the response to 40mV of RF with just a 1N4148-based probe.

To be sure I'm not trying to blow smoke some bad place, I just tried this, with a 1N4148 as detector. Using a _very_ cheap DVM with 1 megohm input resistance, I got 0.1mV output with about 30mV RF input. With a better DVM with 10 megohm input resistance, 15mV of RF is easily detectable at 0.1mV output. This was at 50MHz, but holds down at lower frequencies too.

Cheers,
Tom

# 2300. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 01:56:44 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <E7W5l.1666$em5.1105@newsfe22.iad>
Source record: 3437

"K7ITM" <k7itm@msn.com> wrote in message
news:00278a4d-f14e-49f5-9cb3-b5113424e93c@r15g2000prd.googlegroups.com...
To be sure I'm not trying to blow smoke some bad place, I just tried
this, with a 1N4148 as detector. Using a _very_ cheap DVM with 1
megohm input resistance, I got 0.1mV output with about 30mV RF input.
With a better DVM with 10 megohm input resistance, 15mV of RF is
easily detectable at 0.1mV output. This was at 50MHz, but holds down
at lower frequencies too.

Cheers,
Tom

You ain't blowing smoke or whistling Dixie, otherwise the diode
detector probes for the Boonton RF millivolters would never
have worked!

Pete

## 2301. Modding an AM BCB radio for VLF reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 03:00:04 UTC
From: Frnak McKenney <frnak@far.from.the.madding.crowd.com>
Message-ID: <JsidnbYp05epoMXUnZ2dnUVZ_gSdnZ2d@earthlink.com>
Source record: 3438
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I'd like to listen in on NIST's 60kHz time broadcasts on WWVB "directly", but I like building things, and besides, I'm too chea... er, "thrifty" to go out and buy a VLF-specific receiver.

Down in the basement (a.k.a. The Gorge of Eternal Electronic Peril) I have a couple of AM/FM clock-radios I've accumulated (yard sale? local thrift shop? I forget). Unlike today's Walkman-alike radios, these tend to have large, discrete, and easy-to-reach components, so I wondered if it would be possible to modify one of these to tune in RF in the WWVB and LF-RFID (125kHz) neighborhoods.

Before pulling anything apaprt I thought I'd check the math see if it was even reasonable. I assume these units are standard superhet designs with a local oscillator and a 455kHz IF section, such as the circuit at:

http://ourworld.compuserve.com.homepages/Bill_Bowden/radio.htm

AM BCB: 540-1600 kHz
Tuning capacitor: 140- 15 pF (RF)
60- 10 pF (LO)
0- 12 pF (trimmers)

From Ye Olde Traditional Formula:

F = 1/(2 * %pi * sqrt(L * C) )

it follows that, for a fixed L, F varies with 1/sqrt(C). The capacitance of the RF gang of the tuning capacitor has a 10:1 range, so it can control a frequency range of 1:sqrt(10), or 1:3.2. Similarly, the LO section provides a frequency range of 1:sqrt(6), or 1:2.4.

Working this backwards, it looks like an antenna loop designed for this capacitor would be between 620uH and 660uH; choosing 640uH and working forward the RF section would tune from 532 to 1624 kHz.

This means the LO will run from (532+455) or 987kHz to (1624+455) or 2079kHz kHz, a range of 2.1. Calculating from the low end the associated inductor (LO tank coil) would need to be 428uH yielding an LO range of 993-2433kHz; working from the high end we get 586uH, an LO range of 849-2079kHz. Even if I choose a "middle" value of 500uH, my LO calculations imply that the LO will be as much as 200kHz "off" from the ideal mixing frequency of (RF+455kHz) at either end of the dial; since radios appear (in general) to work, I'll have to assume there's a problem with my LO math.

But ignoring that for now (famous last words <grin!>), that says that if I stick a 75000uH choke in series with the radio's ferrite loopstick, giving a total inductance of 75640uH, the _RF_ section will (theoretically) have a tuning range of 49-149kHz. _IF_ I can get a LO that tunes in sync with this, that is, 504-604kHz, then the IF section will accept and amplify any AM signal from 49 to 149kHz, envelope-detect it, and feed the result through the receiver's amplifier.

I can see a couple of problems, even if I figure out why my LO math doesn't work out:

1) My desired LO range is 1:1.2, well below what the LO section of the tuning capacitor is designed for (1:2.4). However, it looks like slapping a 100pF disk cap in parallel with the LO section will reduce its range to around 1:1.2, and I'd need to find (or wind) a new tank coil anyway.

2) By putting a (relatively huge) RF choke in series with the loopstick antenna, I'm creating a fairly unbalanced "tapped inductor". I have no idea what problems might result from this.

3) I'll be limited to broadcast-alike (10kHz AM) or similar signals unless I want to add a BFO. Since curiosity is what's prompting me, I can live with this restriction.

4) Something Completely Different that I haven't even considered. <grin!>

Has anyone tried this? I looked around the 'web a bit, and did find some "upconverter kits" which appear to turn a superhet receiver into a super-superhet receiver <grin!>, but no one attempting to directly modify an AM receiver.

I have a couple of other items with higher priority (e.g. my "Federal and State 2008 Final Tax Exam") I have to get out of the way before I'll have time to solder anything, but I would like to hear from anyone who caes to comment (especially on my math <grin!>).

Thanks...

Frank McKenney
--
All scientific men were formerly accused of practicing magic.
And no wonder, for each said to himself, "I have carried human intelligence as far as it will go, and yet So-and-so has gone further than I. Ergo, he has taken to sorcery."
-- Baron de Montesquieu
--
Frank McKenney, McKenney Associates
Richmond, Virginia / (804) 320-4887
Munged E-mail: frank uscore mckenney ayut mined spring dawt cahm (y'all)

# 2302. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 05:58:49 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <zGZ5l.22455$mE3.3752@newsfe14.iad>
Source record: 3439

Hey Jimmie! My Panasonic inverter microwave croaked. I got
a chance to replace the power supply! The transformer looks
just like a fancy TV flyback, and the entire board weighs
about 8 ounces. The supplies are about 50 bucks new. Panasonic
vented the ovens through the top, and the moist air flows around
the electronics on the side, causing many early failure modes.
Figured you'd be interested.

Pete

# 2303. Re: Modding an AM BCB radio for VLF reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 11:17:39 UTC
From: Bill M <radioexray@geemail.com>
Message-ID: <gjabkk012vl@news5.newsguy.com>
Source record: 3440
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Frnak McKenney wrote:
> I'd like to listen in on NIST's 60kHz time broadcasts on WWVB
> "directly", but I like building things, and besides, I'm too chea...
> er, "thrifty" to go out and buy a VLF-specific receiver.

May be a moot point if you're just doing this for the heckuvit but
there's nothing to listen to per se at WWVB since the time is encoded
with pulse width modulation, ie no voice.

GL, Bill

# 2304. Re: Radio Shack Pro 2011 scanner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 12:38:10 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <876df091-3dea-4cc6-a05e-f92ff7002b73@v31g2000vbb.googlegroups.com>
Source record: 3441

On Dec 29, 12:58 am, "Tio Pedro" <radioconnect...@cox.net> wrote:
> Hey Jimmie!  My Panasonic inverter microwave croaked.  I got
> a chance to replace the power supply!  The transformer looks
> just like a fancy TV flyback, and the entire board weighs
> about 8 ounces.  The supplies are about 50 bucks new. Panasonic
> vented the ovens through the top, and the moist air flows around
> the electronics on the side, causing many early failure modes.
> Figured you'd be interested.
>
> Pete

Thanks Pete, I order one a couple of months ago to play with and found another at the thrift store the other day. I havent had much of a chance lately. I worked on main frame computer systems for over 20 years and now they put in a new system that is all PCs. You just replace the box when it breaks. I have been going to school on that so much lately I havent gotten back to my project. I do think that there is a place for HVSPs in amateur radio, maybe not microwave oven inverters but someone is going to come up with a good pwer supply at a reasonable price. I invision a device that would mount in place of an existing transformer and maybe sell for half the price of the replacement transformer. Lately my thoughts have gone more towards ways of modifying UPSs. The UPSs operate in a PWM switch mode to convert high frequency chopped signal to 60hz. I figure if you could modify the PWM data that is being used you could drive a step up transformer for HV. One problem I have is finding data on how these operate. It seems no one publishes a schematic.

Jimmie

# 2305. Re: Modding an AM BCB radio for VLF reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 14:41:20 UTC
From: Frnak McKenney <frnak@far.from.the.madding.crowd.com>
Message-ID: <8eSdnUhPWPkNfMXUnZ2dnUVZ_jidnZ2d@earthlink.com>
Source record: 3442
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Bill,

Thanks for the comments.

On Mon, 29 Dec 2008 07:17:39 -0400, Bill M <radioexray@geemail.com> wrote:
> Frnak McKenney wrote:
>> I'd like to listen in on NIST's 60kHz time broadcasts on WWVB
>> "directly", but I like building things, and besides, I'm too chea...
>> er, "thrifty" to go out and buy a VLF-specific receiver.
>
> May be a moot point if you're just doing this for the heckuvit but
> there's nothing to listen to per se at WWVB since the time is encoded
> with pulse width modulation, ie no voice.

I'm hoping that what I build will at least give me some idea of
the WWVB signal strength. I started out being curious about the
various "Atomic clocks" and thought about building a dedicated
60kHz WWVB receiver, but one of the problems one runs into with
an idea like that is that "debugging" can be exremely frustrating
without some piece of equipment that can offer a "second opinion".

It's a question of "navigating" towards a solution. Without some
sort of compass -- or at least some recognizable waypoints -- you
have no idea if you're getting closer to a working design, going
in circles, or moving further and further away. VOMs, 'scopes,
signal generators, spectrum analyzers, PRINT/printf(), and even
(Ack! Phlbbbbt!) 16" tall fanfold core dumps are all tools we
have created for helping us find our way through mazes where our
everyday senses are useless.

And, as you say, I'm just curious: if WWVB is out there, unheard
(by me, so far), I wonder what else might be? <grin!>

Frank
--
If you are not being criticized, you may not be doing much.
-- Donald Rumsfeld
--
Frank McKenney, McKenney Associates
Richmond, Virginia / (804) 320-4887
Munged E-mail: frank uscore mckenney ayut mined spring dawt cahm (y'all)

# 2306. Re: Modding an AM BCB radio for VLF reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 15:29:58 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <W166I.1733$Es4.402@nwrddc01.gnilink.net>
Source record: 3443
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Frnak McKenney" <frnak@far.from.the.madding.crowd.com> wrote in message
news:8eSdnUhPWPkNfMXUnZ2dnUVZ_jidnZ2d@earthlink.com...
>
> Bill,
>
> Thanks for the comments.
>
> On Mon, 29 Dec 2008 07:17:39 -0400, Bill M <radioexray@geemail.com> wrote:
>> Frnak McKenney wrote:
>>> I'd like to listen in on NIST's 60kHz time broadcasts on WWVB
>>> "directly", but I like building things, and besides, I'm too chea...
>>> er, "thrifty" to go out and buy a VLF-specific receiver.
>>
>> May be a moot point if you're just doing this for the heckuvit but
>> there's nothing to listen to per se at WWVB since the time is encoded
>> with pulse width modulation, ie no voice.
>
> I'm hoping that what I build will at least give me some idea of
> the WWVB signal strength. I started out being curious about the
> various "Atomic clocks" and thought about building a dedicated
> 60kHz WWVB receiver, but one of the problems one runs into with
> an idea like that is that "debugging" can be exremely frustrating
> without some piece of equipment that can offer a "second opinion".
>

For $14 you can buy a decent converter- and put it on a decent receiver.
http://jacksonharbor.home.att.net/lfconv.htm

WWVB may be strong, but you may never know with your idea, - not knowing
your converted receiver's sensitivity, immunity to overload, images and the
ability to have a decent antenna.

Dale W4OP

## 2307. Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 15:31:47 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <D366l.1734$Es4.1168@nwrddc01.gnilink.net>
Source record: 3444

Has anyone connected a pair of identical computer supplies in parallel for additional current capabilities? Did it require a low R resistor to allow for any mismatch?

Tnx,

Dale W4OP

# 2308. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 16:29:22 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <63338202-3c36-41fd-8e50-b23f55e2cb89@v15g2000vbb.googlegroups.com>
Source record: 3445

On Dec 29, 10:31 am, "Dale Parfitt" <pari...@verizon.net> wrote:
> Has anyone connected a pair of identical computer supplies in parallel for
> additional current capabilities? Did it require a low R resistor to allow
> for any mismatch?
>
> Tnx,
>
> Dale W4OP

It is something I looked in to one time. I hsd s few power supplies
and thought I would try it. I checked the outputs into a 10 amp loaded
and decided they werent a close enough match to even try. With no
voltage adjust on the power supplies I confess I gave up pretty
easily. If the outputs could be matched I would think this would work.
I would always try to use equalizing resistors. I have had bad
expeiences when I didnt.

Jimmie

# 2309. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 16:44:14 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <y776l.1774$BC4.1163@nwrddc02.gnilink.net>
Source record: 3446

"Dale Parfitt" <parinc1@verizon.net> wrote in message
news:D366l.1734$Es4.1168@nwrddc01.gnilink.net...
> Has anyone connected a pair of identical computer supplies in parallel for
> additional current capabilities? Did it require a low R resistor to allow
> for any mismatch?
>

Since you've asked a general question, I'll give a general answer.
The problem with paralleling power supplies is that the voltage regulators
will fight each other if they are not set to regulate at the same voltage.
Using a low value resistor to isolate the outputs will work, but it will use
power you may not want to waste and your voltage regulation will not be as
good. A technique that was used on mainframe power supplies was to put low
value resistors (actually, calibrated current shunts) on both outputs into a
common load. Then the regulator on one power supply would be adjusted so
that the voltage drop across its resistor would match the voltage drop
across the other resistor. Once the regulators were balanced in this
fashion, the resistors were removed from the circuit and the power supplies
were connected directly to the load. As long as the power supply regulators
tracked identically, there was no problem.

HTH,

-NM

## 2310. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 17:32:41 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <mfmdnWpMk-UpIMTUnZ2dnUVZ_gsAAAAA@web-ster.com>
Source record: 3447

Norm Mann wrote:
> "Dale Parfitt" <parinc1@verizon.net> wrote in message
> news:D366l.1734$Es4.1168@nwrddc01.gnilink.net...
>> Has anyone connected a pair of identical computer supplies in parallel for
>> additional current capabilities? Did it require a low R resistor to allow
>> for any mismatch?
>>
>
> Since you've asked a general question, I'll give a general answer.
> The problem with paralleling power supplies is that the voltage regulators
> will fight each other if they are not set to regulate at the same voltage.
> Using a low value resistor to isolate the outputs will work, but it will use
> power you may not want to waste and your voltage regulation will not be as
> good. A technique that was used on mainframe power supplies was to put low
> value resistors (actually, calibrated current shunts) on both outputs into a
> common load. Then the regulator on one power supply would be adjusted so
> that the voltage drop across its resistor would match the voltage drop
> across the other resistor. Once the regulators were balanced in this
> fashion, the resistors were removed from the circuit and the power supplies
> were connected directly to the load. As long as the power supply regulators
> tracked identically, there was no problem.
>
> HTH,
>
> -NM
>
>
Another method that is currently popular among high-end supplies is to
have a current command output and a current slave input. With proper
jumpering, you set up one power supply as a "master" that outputs a
current command, and have a bunch of "helper" supplies that _don't_
attempt to regulate voltage, but just supply current on command.

If you're _buying_ supplies to do this, I'd suggest hitting the surplus
places for general-purpose switching supplies. MPJA has a good
selection, and I recall being able to find the manufacturer's data
sheets with some digging. You can get much nicer prospects that way
than trying to hack a PC power supply, although it's not as cheap as
dumpster diving for PC parts.

--

Tim Wescott
Wescott Design Services
http://www.wescottdesign.com

Do you need to implement control loops in software?
"Applied Control Theory for Embedded Systems" gives you just what it says.
See details at http://www.wescottdesign.com/actfes/actfes.html

## 2311. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 17:50:32 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <a286l.14052$M01.5666@bignews3.bellsouth.net>
Source record: 3448

JIMMIE wrote:
> On Dec 26, 9:36 pm, "no" <n...@no.com> wrote:
>> He notices that the digital display on your dash is a clock set to GMT.
>
> My daughter must think Im a geek, She gave me a "Fibonacci as easy as
> 1,1,2,3,....." T shirt for Xmas.
>
> Jimmie
I remember seeing a T shirt with "...as easy as Pi" someplace. Same idea.

# 2312. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 17:52:56 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <q486l.14057$M01.1560@bignews3.bellsouth.net>
Source record: 3449

JIMMIE wrote:
> After years of avoiding morse code I am finally getting into it. the
> ideal of operating a very simple transmitter appeals to my junkbox/
> trashcan construction mentality.
> I am looking for a substitue for a 6L6 that has the plate brought out
> the top. I was trying to build a little Glowbug transmitter but was
> having all kinds of problems neutralizing the the thing. I think I
> would have better luck if I can separate the grid and plate circuits
> from each other. I am considering an 807 as a replacement Suggestions
> would be appreciated.
>
> Jimmie
To Hijack an old thread...

The way tubes were numbered sometimes....
The 25L6 and 50L6 are NOT 6L6's with different heater voltages.
Actually both of these tubes are IDENTICAL with the 6W6GT except for the
heater ratings.

## 2313. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 18:20:47 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <3y86l.34896$fs1.26748@newsfe05.iad>
Source record: 3450

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:q486l.14057$M01.1560@bignews3.bellsouth.net...
> > To Hijack an old thread...
>
> The way tubes were numbered sometimes....
> The 25L6 and 50L6 are NOT 6L6's with different heater voltages.
> Actually both of these tubes are IDENTICAL with the 6W6GT except for the
> heater ratings.

Ken, isn't the 6W6 a high perveance tube, hence the relatively high
filament current? If so, it might work well in a TX with slightly
lower plate volages. I have a sleeve or two of those looking for
a project...

Pete

## 2314. 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 18:21:51 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <3z86l.34897$fs1.18091@newsfe05.iad>
Source record: 3501

Anyone really, really old dudes on hear who can advise
on how much RF power an 01 can handle? Can it drive
a 45 power stage?

Pete

# 2315. Re: 6L6 substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 19:09:13 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <Hd96l.14276$mw2.7254@bignews4.bellsouth.net>
Source record: 3502

Tio Pedro wrote:
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:q486l.14057$M01.1560@bignews3.bellsouth.net...
>> > To Hijack an old thread...
>>
>> The way tubes were numbered sometimes....
>> The 25L6 and 50L6 are NOT 6L6's with different heater voltages.
>> Actually both of these tubes are IDENTICAL with the 6W6GT except for the
>> heater ratings.
>
> Ken, isn't the 6W6 a high perveance tube, hence the relatively high
> filament current? If so, it might work well in a TX with slightly
> lower plate volages. I have a sleeve or two of those looking for
> a project...
>
> Pete
>
>
Based on what I found on google for 'high perveance' I guess so.
This tube has a max plate voltage rating of 330v, and a max G2 rating of
165 volts. It was used as an AF output tube in low plate voltage
radios, and in TV sets as a vertical output tube.

The 6Y6 is a similar tube, with 50ma more heater current and the same
plate dissipation rating in a larger bulb. It can handle higher plate
current than the 6W6, and it's max plate voltage and G2 rating is 200v.

I know that 50c5's and 50l6's were used in transmitter projects, so the
6W6 will work in the same circuits. The 6Y6 might bear looking into as
well.

## 2316. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 19:32:19 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <7B96l.57095$X05.5123@newsfe03.iad>
Source record: 3503

Is there a feedback sensing line for voltage regulation
in the computer supplies that is accessible?
One trick I've seen done is to diode OR
the supplies, with the sense lines on the common
supply bus, after the diodes. MACom did this
on the massive switchers we used in our old fiber
nodes at work.

# 2317. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 19:44:03 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <eJ96l.9$Y32.6@bignews8.bellsouth.net>
Source record: 3504

Tio Pedro wrote:
> Anyone really, really old dudes on hear who can advise
> on how much RF power an 01 can handle? Can it drive
> a 45 power stage?
>
> Pete
>
>
I have various old tube manuals in print and on disk.
None of them seem to list the maximum ratings for the 01A.
Maximum plate voltage seems to be 135 volts and max plate current
seems to be 3-5 ma. No mention of plate dissipation, but I think
that the plate voltage/current limitations will be the factor
here. I think the type '171 ('71A) which was used as an output stage in
old radios would make a better tube for this purpose. It can handle
up to 180 volts and at least 20ma of plate current. Again no plate
dissipation rating given. Also consider the type 12A, which is
a 'heavier' 01A rated to 180 volts and maybe 10ma of plate current.

# 2318. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 19:46:04 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <6L96l.11$Y32.5@bignews8.bellsouth.net>
Source record: 3505

Tio Pedro wrote:
> Is there a feedback sensing line for voltage regulation
> in the computer supplies that is accessible?
> One trick I've seen done is to diode OR
> the supplies, with the sense lines on the common
> supply bus, after the diodes. MACom did this
> on the massive switchers we used in our old fiber
> nodes at work.
>
>
I'd vote for the diode method, moving the sense line to after the diodes
OR just adjusting the supplies for about .6V more than what you want to
compensate for the diode voltage drop.

# 2319. Re: Modding an AM BCB radio for VLF reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 19:51:26 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <9Q96l.13$Y32.0@bignews8.bellsouth.net>
Source record: 3506
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Frnak McKenney wrote:
> Bill,
>
> Thanks for the comments.
>
> On Mon, 29 Dec 2008 07:17:39 -0400, Bill M <radioexray@geemail.com> wrote:
>> Frnak McKenney wrote:
>>> I'd like to listen in on NIST's 60kHz time broadcasts on WWVB
>>> "directly", but I like building things, and besides, I'm too chea...
>>> er, "thrifty" to go out and buy a VLF-specific receiver.
>> May be a moot point if you're just doing this for the heckuvit but
>> there's nothing to listen to per se at WWVB since the time is encoded
>> with pulse width modulation, ie no voice.
>
> I'm hoping that what I build will at least give me some idea of
> the WWVB signal strength. I started out being curious about the
> various "Atomic clocks" and thought about building a dedicated
> 60kHz WWVB receiver, but one of the problems one runs into with
> an idea like that is that "debugging" can be exremely frustrating
> without some piece of equipment that can offer a "second opinion".
>
> It's a question of "navigating" towards a solution. Without some
> sort of compass -- or at least some recognizable waypoints -- you
> have no idea if you're getting closer to a working design, going
> in circles, or moving further and further away. VOMs, 'scopes,
> signal generators, spectrum analyzers, PRINT/printf(), and even
> (Ack! Phlbbbbt!) 16" tall fanfold core dumps are all tools we
> have created for helping us find our way through mazes where our
> everyday senses are useless.
>
> And, as you say, I'm just curious: if WWVB is out there, unheard
> (by me, so far), I wonder what else might be? <grin!>
>
>
> Frank
> --
> If you are not being criticized, you may not be doing much.
> -- Donald Rumsfeld
> --
> Frank McKenney, McKenney Associates
> Richmond, Virginia / (804) 320-4887
> Munged E-mail: frank uscore mckenney ayut mined spring dawt cahm (y'all)
I wonder if NAA is still on the air. They were on 14 KHZ IIRC and at

least the were sending CW. I remember an article in QST where someone built a regenerative receiver to pick up their signal using old honeycomb coils and a .001uf variable capacitor. Someone else did the same thing, but used an old tv flyback transformer (minus the ferrite core) for the coil and a three gang TRF capacitor to tune it.

But how long is a 1/2 wave antenna at that frequency?

# 2320. Re: Modding an AM BCB radio for VLF reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 20:00:00 UTC
From: NoSPAM <unknown@nospam.org>
Message-ID: <__96l.34909$fs1.2495@newsfe05.iad>
Source record: 3507

"Frnak McKenney" <frnak@far.from.the.madding.crowd.com> wrote in message
news:8eSdnUhPWPkNfMXUnZ2dnUVZ_jidnZ2d@earthlink.com...
> I'm hoping that what I build will at least give me some idea of
> the WWVB signal strength. I started out being curious about the
> various "Atomic clocks" and thought about building a dedicated
> 60kHz WWVB receiver, but one of the problems one runs into with
> an idea like that is that "debugging" can be exremely frustrating
> without some piece of equipment that can offer a "second opinion".

I suggest you consult http://tf.nist.gov/stations/wwvbcoverage.htm. This shows the predicted coverage of WWVB at two hour intervals. Quoting from NIST's text:

"The coverage maps shown below are computer-generated estimates of WWVB signal strength under typical conditions. They show estimated signal coverage at two-hour intervals over the course of a day with WWVB operating at 50 kW radiated power. The shaded areas indicate those areas where signal levels are 100 microvolts per meter or greater. Note that the coverage area contracts during daylight hours and expands during nighttime hours."

It appears that, except for Florida, the middle and northern East Coast, and selected portions of the Northwest, the continental United States coverage is pretty solid. With the cost of commercial WWVB clocks being as low as $10.00, I'd buy one just to see if it can synchronize where you live.

QST and Ham Radio magazines have published several low frequency converter designs that may be useful for study:

Apr 2002 QST, Frank Gentges and Steve Ratzlaff: AMRAD Low Frequency Upconverter (correction Oct 2002)
Jun 1977 QST, Doug DeMaw & Jay Rusgrove: A High-Performance Low-Frequency Converter
Nov 1976 Ham Radio, Guenter Ruehr:Tuned Very Low-Frequency Converter
Apr 1964 QST, G. Holmes Wilson: A Simple Low-Frequency Converter
and for the Boatanchor enthusiast
Sep 1940 QST, Raymond Woodward, A Low-Frequency Converter

73, Dr. Barry L. Ornitz WA4VZQ

# 2321. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 20:05:48 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-2F9622.15054829122008@news.mixmin.net>
Source record: 3508

In article
<00278a4d-f14e-49f5-9cb3-b5113424e93c@r15g2000prd.googlegroups.com>,
K7ITM <k7itm@msn.com> wrote:

> To be sure I'm not trying to blow smoke some bad place, I just tried
> this, with a 1N4148 as detector.

Tom & Larry-

Perhaps it is understood but not mentioned. If a test point has a DC level, connecting a diode might disturb the circuit.

If an oscilloscope is not available, I would use a 0.001 MFD series capacitor from the circuit, to a 10K Ohm resistor shunted by a 1N4148 diode to ground. The junction of the capacitor and diode/resistor combination, becomes a new test point that can be read on the lower ranges of a DC multimeter.

Of course the reading is only relative, but is quite handy when you need to tune for maximum output. In some cases I've permanently wired these test points into the circuit. That way you don't change tuning by removing the circuit.

Fred
K4DII

## 2322. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 20:15:51 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Wda6l.19240$H11.15805@newsfe09.iad>
Source record: 3509

"Fred McKenzie" <fmmck@aol.com> wrote in message news:fmmck-2F9622 > Of course the reading is only relative, but is quite handy when you need
> to tune for maximum output. In some cases I've permanently wired these
> test points into the circuit. That way you don't change tuning by
> removing the circuit.
>
> Fred
> K4DII

It would be easy to cobble a FET cathode follower to avoid
the loading issues, but that might be more than the OP wants
to get involved with.

# 2323. HC16 DSP Development Kit - M68HC16TK - M68HC16A1EVB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 20:33:19 UTC
From: Hello.com
Message-ID: <TrqdnQIUfoKRqcTUnZ2dnUVZ_jqdnZ2d@giganews.com>
Source record: 3510

HC16 DSP Development Kit - M68HC16TK - M68HC16A1EVB

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=150318142852

## 2324. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 20:33:33 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <714d35e6-e2ae-4469-885f-bb257428d2ae@c36g2000prc.googlegroups.com>
Source record: 3511

On Dec 29, 12:05 pm, Fred McKenzie <fm...@aol.com> wrote:
> In article
> <00278a4d-f14e-49f5-9cb3-b5113424e...@r15g2000prd.googlegroups.com>,
>
>  K7ITM <k7...@msn.com> wrote:
> > To be sure I'm not trying to blow smoke some bad place, I just tried
> > this, with a 1N4148 as detector.
>
> Tom & Larry-
>
> Perhaps it is understood but not mentioned.  If a test point has a DC
> level, connecting a diode might disturb the circuit.
>
> If an oscilloscope is not available, I would use a 0.001 MFD series
> capacitor from the circuit, to a 10K Ohm resistor shunted by a 1N4148
> diode to ground.  The junction of the capacitor and diode/resistor
> combination, becomes a new test point that can be read on the lower
> ranges of a DC multimeter.
>
> Of course the reading is only relative, but is quite handy when you need
> to tune for maximum output.  In some cases I've permanently wired these
> test points into the circuit.  That way you don't change tuning by
> removing the circuit.
>
> Fred
> K4DII

Yes, I was thinking that I probably should have shared the circuit I used. With proper construction the load on the RF circuit is mainly the diode's capacitance. For the test circuit, I used a 100pF cap from the RF to be measured, to the diode's cathode. Diode's anode to ground. I put a 10k resistor from the junction of the cap and diode off to an 0.1uF cap to ground, and monitored the voltage across that 0.1uF cap with the volt meter. I'd have used an RF choke instead of the resistor if I were trying to optimize it for some specific range of frequencies, or just a high value resistor. But since my source was a nice low impedance, there wasn't any need to optimize that part of the circuit further.

Sensitivity for very low RF voltages is greatly enhanced by using a high impedance meter. I would NOT put a 10k resistor to ground there if I wanted sensitivity to low millivolt RF, since the diode average current at low RF voltages is very low indeed. You can see that from my reported results with the 1N4148 detector, with a 1 megohm meter load versus with a 10 megohm meter load. With the high impedances

involved, the 100pF cap allows response down to well below what would normally be considered RF frequencies. In the circuit described above, the low-side 3dB corner frequency will be about that of the 100pF cap and the 10k resistor.

Cheers,
Tom

# 2325. Re: HC16 DSP Development Kit - M68HC16TK - M68HC16A1EVB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 20:56:52 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <nQa6l.34912$fs1.27629@newsfe05.iad>
Source record: 3512

"Hello.com" <hi@hello..com> wrote in message
news:TrqdnQIUfoKRqcTUnZ2dnUVZ_jqdnZ2d@giganews.com...
> HC16 DSP Development Kit - M68HC16TK - M68HC16A1EVB
>
>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=150318142852
>
Not being a computer geek, would be this be usable for playing around with
hardware/software to control a PLL and maybe a display for a homebrew RX?

Pete

# 2326. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 22:40:31 UTC
From: DaveM <masondg4499@comcast99.net>
Message-ID: <LomdncoRZ818zMTUnZ2dnUVZ_oDinZ2d@giganews.com>
Source record: 3513

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:7B96l.57095$X05.5123@newsfe03.iad...
> Is there a feedback sensing line for voltage regulation
> in the computer supplies that is accessible?
> One trick I've seen done is to diode OR
> the supplies, with the sense lines on the common
> supply bus, after the diodes. MACom did this
> on the massive switchers we used in our old fiber
> nodes at work.
>

There are no sense lines available externally on a PC power supply. You might take a look at the article on modding PC power supplies at http://www.pavouk.org/hw/en_atxps.html. It shows a typical schematic (albeit a bit aged now). Look at it and you can see where you might bring the sense lines out of a "master" unit and run them into the "slave" units. No guarantee that it will work, but I'd rather try that approach before the diode or resistor solutions.
Of course, your PSUs will be different from the schematic in the web page, but it should be similar enough that you can figure it out.
--
Dave M
MasonDG44 at comcast dot net (Just substitute the appropriate characters in the address)

Life is like a roll of toilet paper; the closer it gets to the end, the faster it goes.

# 2327. Re: HC16 DSP Development Kit - M68HC16TK - M68HC16A1EVB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-29 23:31:48 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <90d6l.85$gE4.63@bignews5.bellsouth.net>
Source record: 3514

Tio Pedro wrote:
> "Hello.com" <hi@hello..com> wrote in message
> news:TrqdnQIUfoKRqcTUnZ2dnUVZ_jqdnZ2d@giganews.com...
>> HC16 DSP Development Kit - M68HC16TK - M68HC16A1EVB
>>
>>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&ssPageName=STRK:MESELX:IT&item=150318142852
>>
> Not being a computer geek, would be this be usable for playing around with
> hardware/software to control a PLL and maybe a display for a homebrew RX?
>
> Pete
>
>
A bit overkill for that. DSP cpu's are good for signal processing such
as digital filtering of audio. Look for a nice AVR or PIC development
board.

# 2328. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 03:28:05 UTC
From: lagagnon <lagagnon@gmail.com>
Message-ID: <efe081fa-2dc9-4758-aece-ff147ba132e1@i20g2000prf.googlegroups.com>
Source record: 3515

On Dec 29, 6:00 am, "Tio Pedro" <radioconnect...@cox.net> wrote:
> Well, the old Boonton RF millivolters are dirt cheap these days...
>
> Do you have a good scope on hand?

DOH! In fact I do have access to one via a friend. Why didn't I think of that in the first place? Too much wine and egg nog over Christmas I guess. But also, thanks to v\everyone for all their comments - all very useful and if the scope doesn't work for me I will try some of the other ideas out. Cheers...

Larry VE7EA

# 2329. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 04:04:18 UTC
From: Lynn <coffelt2@comcast.net>
Message-ID: <29Kdne8Xn-VWAMTUnZ2dnUVZ_gydnZ2d@giganews.com>
Source record: 3516

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:3z86l.34897$fs1.18091@newsfe05.iad...
> Anyone really, really old dudes on hear who can advise
> on how much RF power an 01 can handle? Can it drive
> a 45 power stage?
>
> Pete

No. I don't have technical references as Ken does, but from
practical experience (hope I'm not disclosing my age here),
but the 01A is much better suited as a receiver RF stage, or
a one tube "regenerative" set.......... or maybe an audio amp
driving headphones.

If you're bound and determined to use these old bottles, a
better choice (I think) would be a 45 oscillator driving another
45 amplifier stage.

I've tried using 01A's in transmitter duty, but usually ended up
noticing a bright flash and then no more glow at all!....SOB

A 45 by itself as a one tube, crystal controlled transmitter isn't
too bad either. An FCC monitoring station somewhere in
Nebraska (If I recall correctly) objected to my 45's key clicks,
however. (And I was running an honest 3 watts on 40 in
Washington State.

Old Chief Lynn

# 2330. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 04:48:50 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <NKh6l.12318$gY5.3589@newsfe21.iad>
Source record: 3517

"Lynn" <coffelt2@comcast.net> wrote in message
news:29Kdne8Xn-VWAMTUnZ2dnUVZ_gydnZ2d@giganews.com...
>
> If you're bound and determined to use these old bottles, a
> better choice (I think) would be a 45 oscillator driving another
> 45 amplifier stage.
>
> I've tried using 01A's in transmitter duty, but usually ended up
> noticing a bright flash and then no more glow at all!....SOB
>
> A 45 by itself as a one tube, crystal controlled transmitter isn't
> too bad either. An FCC monitoring station somewhere in
> Nebraska (If I recall correctly) objected to my 45's key clicks,
> however. (And I was running an honest 3 watts on 40 in
> Washington State.
>
> Old Chief Lynn

If I had the money, I'd be using 10s, 801s or one of the
bottles that are so coveted by the audio guys these days..
I saw a few 01 xtal oscillators in early QSTs, but very
little information was given about them. Globe 45 tube
are extremely pricey too, unfortunately. I have a few
45 globes in the stash..

Pete

## 2331. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 05:29:30 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Vki6l.31223$ly1.3460@newsfe19.iad>
Source record: 3518

" > DOH! In fact I do have access to one via a friend. Why didn't I think
> of that in the first place? Too much wine and egg nog over Christmas I
> guess. But also, thanks to v\everyone for all their comments - all
> very useful and if the scope doesn't work for me I will try some of
> the other ideas out. Cheers...
>
> Larry VE7EA
>

don't forget the scope is going to give you a very high reading,
since the display is peak-to-peak. You'll have to take the
reading from the waveform's 0 voltage cross-over
poiint to the peak of on one side of the full
waveform, and multiply by .707 to get the RMS value.

Pete

# 2332. Re: HC16 DSP Development Kit - M68HC16TK - M68HC16A1EVB

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 05:45:24 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Pzi6l.12347$gY5.6568@newsfe21.iad>
Source record: 3519

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:90d6l.85$gE4.63@bignews5.bellsouth.net...
> >>
> A bit overkill for that. DSP cpu's are good for signal processing such as
> digital filtering of audio. Look for a nice AVR or PIC development board.

Duh!! Stupid me! I glossed right over the DSP part, I thought it
was an earlier Motorola processor evaluation board.

Pete

## 2333. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 07:32:18 UTC
From: K7ITM <k7itm@msn.com>
Message-ID: <de4af91c-b836-4bab-aa19-91ff73c34e3a@v5g2000prm.googlegroups.com>
Source record: 3520

On Dec 29, 9:29 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> " > DOH! In fact I do have access to one via a friend. Why didn't I think
>
> > of that in the first place? Too much wine and egg nog over Christmas I
> > guess. But also, thanks to v\everyone for all their comments - all
> > very useful and if the scope doesn't work for me I will try some of
> > the other ideas out. Cheers...
>
> > Larry VE7EA
>
> don't forget the scope is going to give you a very high reading,
> since the display is peak-to-peak.  You'll have to take the
> reading from the waveform's  0 voltage cross-over
> poiint to the peak of on one side of the full
> waveform, and multiply by .707 to get the RMS value.
>
> Pete

Another point about scopes and their probes: they commonly put quite a bit of capacitance (several pF) at the point they're measuring. A 10:1 passive probe with a couple meters of cable will have several tens of pF capacitance in the cable, and the capacitive part of the divider at the probe body can't drop that by more than 10:1. I'm not sure where the OP will be probing; it may be low enough frequency and low enough impedance that it doesn't matter. But it's quite possible for a decent diode-based RF probe to present lower capacitance than a scope probe. Probing things without disturbing them can be very tricky at times.

Cheers,
Tom

# 2334. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 08:51:41 UTC
From: JIMMIE <jimmie68@gmail.com>
Message-ID: <9d02a994-58b3-49a8-99ab-4a1aabf2bfab@v13g2000yqm.googlegroups.com>
Source record: 3521

On Dec 29, 5:40 pm, "DaveM" <masondg4...@comcast99.net> wrote:
> "Tio Pedro" <radioconnect...@cox.net> wrote in message
>
> news:7B96l.57095$X05.5123@newsfe03.iad...
>
> > > Is there a feedback sensing line for voltage regulation
> > > in the computer supplies that is accessible?
> > > One trick I've seen done is to diode OR
> > > the supplies, with the sense lines on the common
> > > supply bus, after the diodes.  MACom did this
> > > on the massive switchers we used in our old fiber
> > > nodes at work.
>
> There are no sense lines available externally on a PC power supply.  You might
> take a look at the article on modding PC power supplies
athttp://www.pavouk.org/hw/en_atxps.html.  It shows a typical schematic (albeit a
> bit aged now).  Look at it and you can see where you might bring the sense lines
> out of a "master" unit and run them into the "slave" units.  No guarantee that
> it will work, but I'd rather try that approach before the diode or resistor
> solutions.
> Of course, your PSUs will be different from the schematic in the web page, but
> it should be similar enough that you can figure it out.
> --
> Dave M
> MasonDG44 at comcast dot net  (Just substitute the appropriate characters in the
> address)
>
> Life is like a roll of toilet paper; the closer it gets to the end, the faster
> it goes.

As long as they use the same IC it shouldnt be too difficult to
figure it out even if the rest of the circuit is different.

Jimmie

# 2335. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 12:03:22 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <84c626e3-0387-44c5-b736-27e65d2b6d40@x16g2000prn.googlegroups.com>
Source record: 3522

On Dec 29, 10:31 am, "Dale Parfitt" <pari...@verizon.net> wrote:
> Has anyone connected a pair of identical computer supplies in parallel for
> additional current capabilities? Did it require a low R resistor to allow
> for any mismatch?
>
> Tnx,
>
> Dale W4OP

Hey OM
With my credit union branch going bellie up they tossed out tons of computers. I can imagine there is comp supplies aplenty out there now I see the wires them selves acting as milli volt drops. I mean how many ground wires are coming out 8? Just use one ground wire and they act like resistors. Albeit you better load those puppies up so that little 18 AWG ground wire will do it's balancing act. I remember buying comp supplies at Dayton one year for 50 cent they only worked good when I loaded the 5 volt up big tme. Probably rejects brand new in the box.

73 OM
n8zu

# 2336. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 12:56:41 UTC
From: raypsi <RBorowiak@gmail.com>
Message-ID: <c76f70ef-0cc1-49f8-b161-897bd8b470a0@r37g2000prr.googlegroups.com>
Source record: 3523

On Dec 29, 1:21 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> Anyone really, really old dudes on hear who can advise
> on how much RF power an 01 can handle? Can it drive
> a 45 power stage?
>
> Pete

Hey OM
How old is a really really old dude? Is that like Methuselah?
Although Ima really old fart. I think there would be to much gas in
that tube for you to use it for anything but a gas regulator tube. I
bet it would fire up at 150 VDC wit that nice blueish glow.

73 OM
n8zu

# 2337. Re: RF probe for millivolts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 12:57:04 UTC
From: M0WYM <Sansspam@peartreegreen.org>
Message-ID: <gjd5r0$g4t$1@news.albasani.net>
Source record: 3524

K7ITM wrote:
<SNIP>

>
> Sensitivity for very low RF voltages is greatly enhanced by using a
> high impedance meter. I would NOT put a 10k resistor to ground there
> if I wanted sensitivity to low millivolt RF, since the diode average
> current at low RF voltages is very low indeed. You can see that from
> my reported results with the 1N4148 detector, with a 1 megohm meter
> load versus with a 10 megohm meter load. With the high impedances
> involved, the 100pF cap allows response down to well below what would
> normally be considered RF frequencies. In the circuit described
> above, the low-side 3dB corner frequency will be about that of the
> 100pF cap and the 10k resistor.
>
> Cheers,
> Tom

You might find this interesting:
http://www.cliftonlaboratories.com/diodes_for_rf_probes.htm

Charlie.

--
M0WYM
www.radiowymsey.org

Sign today!
http://petitions.pm.gov.uk/SaveShortwave/

# 2338. Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 13:08:14 UTC
From: M0WYM <Sansspam@peartreegreen.org>
Message-ID: <gjd6fv$htk$1@news.albasani.net>
Source record: 3525

I wonder if anyone knows of a project or kit that uses a 'scope
timebase output as the basis of an HF spectrum analyser. My aim is
to make something that would be useful for filter work so I'm not
necessarily looking for very wide frequency sweep.

TIA,

Charlie.

--
M0WYM
www.radiowymsey.org

Sign today!
http://petitions.pm.gov.uk/SaveShortwave/

# 2339. Re: Modding an AM BCB radio for VLF reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 14:24:13 UTC
From: Frnak McKenney <frnak@far.from.the.madding.crowd.com>
Message-ID: <nI-dncMZdfCQssfUnZ2dnUVZ_oninZ2d@earthlink.com>
Source record: 3526
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 29 Dec 2008 15:29:58 GMT, Dale Parfitt <parinc1@verizon.net> wrote:
>
> "Frnak McKenney" <frnak@far.from.the.madding.crowd.com> wrote in message
> news:8eSdnUhPWPkNfMXUnZ2dnUVZ_jidnZ2d@earthlink.com...
--snip--
>> On Mon, 29 Dec 2008 07:17:39 -0400, Bill M <radioexray@geemail.com> wrote:
>>> Frnak McKenney wrote:
>>>> I'd like to listen in on NIST's 60kHz time broadcasts on WWVB
>>>> "directly", but I like building things, and besides, I'm too chea...
>>>> er, "thrifty" to go out and buy a VLF-specific receiver.
>>>
>>> May be a moot point if you're just doing this for the heckuvit but
>>> there's nothing to listen to per se at WWVB since the time is encoded
>>> with pulse width modulation, ie no voice.
>>
>> I'm hoping that what I build will at least give me some idea of
>> the WWVB signal strength. I started out being curious about the
>> various "Atomic clocks" and thought about building a dedicated
>> 60kHz WWVB receiver, but one of the problems one runs into with
>> an idea like that is that "debugging" can be exremely frustrating
>> without some piece of equipment that can offer a "second opinion".

> For $14 you can buy a decent converter- and put it on a decent receiver.
> http://jacksonharbor.home.att.net/lfconv.htm
>
> WWVB may be strong, but you may never know with your idea, - not knowing
> your converted receiver's sensitivity, immunity to overload, images and the
> ability to have a decent antenna.

Dale,

Thanks for the pointer. I apparently overlooked this one. Now all I
have to do is find "a decent receiver". <grin!>

Actually, it's a good excuse to fire up the old Heathkit Mohican
shortwave set (with SIX -- count 'em! SIX transistors!) my father
and I built some years back as a brithday gift for my mother. I
replaced the power supply electrolytics a few years ago so I could
hear static and background hiss over the hum (yes, it was that bad
<grin!>), but the insides could use a good dusting as well. Tighten
up the dial cord. That sort of thing.

And $14 vs. several hours with a 'scope and a signal generator
trying to tune my "hacked" RF and LO sections sounds like a good
choice.

Thanks.

Frank
--
Once we believe in ourselves, we can risk curiosity, wonder,
spontaneous delight, or any experience that reveals the human
spirit. -- e e cummings
--
Frank McKenney, McKenney Associates
Richmond, Virginia / (804) 320-4887
Munged E-mail: frank uscore mckenney ayut mined spring dawt cahm (y'all)

# 2340. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 14:41:38 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <xqq6l.24140$701.1410@newsfe12.iad>
Source record: 3527

"M0WYM" <Sansspam@peartreegreen.org> wrote in message
news:gjd6fv$htk$1@news.albasani.net...
>I wonder if anyone knows of a project or kit that uses a 'scope timebase
>output as the basis of an HF spectrum analyser. My aim is to make something
>that would be useful for filter work so I'm not necessarily looking for
>very wide frequency sweep.
> Charlie. M0WYM
>

My own analyzer was a kit for a QST project sold by
A&A Engineering; the design centered around a CATV
module and had it's own timebase and IF strip/log detector
internally. The analyzer used the scope as a X-Y display.
For serious SSB and CW filter work the VCO is going to
be tricky, you'll need low phase noise, etc.; and a good
set of narrow IF filters that can be swept is another
can of worms. Most of the ham analyzers are better
suited for wider IF responses and wide sweep ranges.
I did a major rework of the IF and Log Amp using an
Analog Devices chip, but the analyzer still has
limitations.

I'd seriously look at some of the DSP receiver kits that
are now on the market--most offer spectrum display
on the computer screen, and adding a good, but
simple, sweep generator might be an easier approach.

Pete

# 2341. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 14:43:53 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Esq6l.24143$701.10437@newsfe12.iad>
Source record: 3528

"raypsi" <RBorowiak@gmail.com> wrote in message
news:c76f70ef-0cc1-49f8-b161-897bd8b470a0@r37g2000prr.googlegroups.com...
> >
> Hey OM
> How old is a really really old dude? Is that like Methuselah?
> Although Ima really old fart. I think there would be to much gas in
> that tube for you to use it for anything but a gas regulator tube. I
> bet it would fire up at 150 VDC wit that nice blueish glow.
>
> 73 OM
> n8zu

Old, crotchity, and ill temptered!! Ha ha.. Definitely in the Old
Fart catagory. QST did show some circuits using the 01s in
xtal oscillators, so I know it was done.Whether it worked worth
a darn, who knows! I suffer from too much gas, but I've never
glowed like a Smurf.

Pete

# 2342. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 14:54:49 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <ZCq6l.1994$Es4.1304@nwrddc01.gnilink.net>
Source record: 3529

"M0WYM" <Sansspam@peartreegreen.org> wrote in message
news:gjd6fv$htk$1@news.albasani.net...
>I wonder if anyone knows of a project or kit that uses a 'scope timebase
>output as the basis of an HF spectrum analyser. My aim is to make something
>that would be useful for filter work so I'm not necessarily looking for
>very wide frequency sweep.
>
> TIA,
>
>
> Charlie.
>
Hi Charlie,
For very little money, you can buy the miniVNA:
http://www.miniradiosolutions.com/

That will far outplay anything you can build. Because it makes use of a PC,
it will have features well beyond a simple SA + tracking generator. In
addition, it's a vector device.

GL,
Dale W4OP

# 2343. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 16:30:48 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <T0s6l.25065$hr3.2131@newsfe01.iad>
Source record: 3530

"Dale Parfitt" <parinc1@verizon.net> wrote in message news:ZCq6l.1994$ >>
> Hi Charlie,
> For very little money, you can buy the miniVNA:
> http://www.miniradiosolutions.com/
>
> That will far outplay anything you can build. Because it makes use of a
> PC, it will have features well beyond a simple SA + tracking generator. In
> addition, it's a vector device.
>
> GL,
> Dale W4OP
>

Their scalar network analyzer looks awesome too!
There's an amazing lack of "boatanchor" hardware
in these devices.

# 2344. Re: Paralleling computer power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 16:38:02 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <E7s6l.167$4u2.58@newsfe02.iad>
Source record: 3531

"raypsi" <RBorowiak@gmail.com> wrote in message news:84c626e3- I remember
> buying comp supplies at Dayton one year for 50 cent they only worked
> good when I loaded the 5 volt up big tme. Probably rejects brand new
> in the box.
>
> 73 OM
> n8zu

That is not unusual. Many of those supplies require loads
or they will crowbar.

Pete

# 2345. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 18:05:31 UTC
From: M0WYM <Sansspam@peartreegreen.org>
Message-ID: <gjdntc$8i5$1@news.albasani.net>
Source record: 3532

Dale Parfitt wrote:
<SNIP>
> For very little money, you can buy the miniVNA:
> http://www.miniradiosolutions.com/
>
> That will far outplay anything you can build. Because it makes use of a PC,
> it will have features well beyond a simple SA + tracking generator. In
> addition, it's a vector device.
>
> GL,
> Dale W4OP
>
>
Dale,

That is neat but it works out as over ï¿½200 here (around $300). I
will bear it in mind as it would be great for antenna work using a
laptop.

Thanks,

Charlie.

--
M0WYM
www.radiowymsey.org

Sign today!
http://petitions.pm.gov.uk/SaveShortwave/

# 2346. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 18:07:59 UTC
From: M0WYM <Sansspam@peartreegreen.org>
Message-ID: <gjdo1v$8i5$2@news.albasani.net>
Source record: 3533

Tio Pedro wrote:
<SNIP>
>
> I'd seriously look at some of the DSP receiver kits that
> are now on the market--most offer spectrum display
> on the computer screen, and adding a good, but
> simple, sweep generator might be an easier approach.
>
> Pete
>
>

Pete,

That does sound interesting and pretty inexpensive. You have me
thinking now :)

Thanks,

Charlie.

--
M0WYM
www.radiowymsey.org

Sign today!
http://petitions.pm.gov.uk/SaveShortwave/

# 2347. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 18:09:32 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <Eqt6l.429$Y32.30@bignews8.bellsouth.net>
Source record: 3534

raypsi wrote:
> On Dec 29, 1:21 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
>> Anyone really, really old dudes on hear who can advise
>> on how much RF power an 01 can handle? Can it drive
>> a 45 power stage?
>>
>> Pete
>
> Hey OM
> How old is a really really old dude? Is that like Methuselah?
> Although Ima really old fart. I think there would be to much gas in
> that tube for you to use it for anything but a gas regulator tube. I
> bet it would fire up at 150 VDC wit that nice blueish glow.
>
> 73 OM
> n8zu

The 01A was considered a 'hard vacuum' tube, the '00 was a 'vapor' tube, or soft vacuum tube. The only reason that the '00 was even made was because many 'old timers' (at the time that the '00 came out) remembered using the ORIGINAL DeForest Audio which was a soft vacuum tube. By carefully adjusting the plate and filament voltages a very sensitive operating point could be found. The tube was probably acting as a thyratron at this point, on the verge of super-conduction. The '00 could also operate this way, but since it's manufacture was more controlled than the original Audion the operating point was well known.

Even with it's 'hard vacuum' the 01 didn't have as good a 'getter' as later tubes and would arc over with more than 130 volts or so. It was used as a transmitter before the type 202 tube became widely available, but was a QRP thing, less than a watt input.

# 2348. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 18:15:55 UTC
From: M0WYM <Sansspam@peartreegreen.org>
Message-ID: <gjdogs$9at$1@news.albasani.net>
Source record: 3535

M0WYM wrote:

>
> That is neat but it works out as over ï¿½200 here

Just seen an add for it in this months RadCom, Martin Lynch has it
at ï¿½259.95 ($426)!

Charlie.

--
M0WYM
www.radiowymsey.org

Sign today!
http://petitions.pm.gov.uk/SaveShortwave/

## 2349. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 19:28:09 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <6Du6l.44247$an4.16900@newsfe08.iad>
Source record: 3536

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:Eqt6l.429$Y32.30@bignews8.bellsouth.net...
> > Even with it's 'hard vacuum' the 01 didn't have as good a 'getter' as
> later tubes and would arc over with more than 130 volts or so. It was
> used as a transmitter before the type 202 tube became widely available,
> but was a QRP thing, less than a watt input.

Will it have enough output to drive a 245?

# 2350. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 19:47:46 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <CVu6l.2012$BC4.173@nwrddc02.gnilink.net>
Source record: 3537

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:T0s6l.25065$hr3.2131@newsfe01.iad...
>
> "Dale Parfitt" <parinc1@verizon.net> wrote in message news:ZCq6l.1994$ >>
>> Hi Charlie,
>> For very little money, you can buy the miniVNA:
>> http://www.miniradiosolutions.com/
>>
>> That will far outplay anything you can build. Because it makes use of a
>> PC, it will have features well beyond a simple SA + tracking generator.
>> In addition, it's a vector device.
>>
>> GL,
>> Dale W4OP
>>
>
> Their scalar network analyzer looks awesome too!
> There's an amazing lack of "boatanchor" hardware
> in these devices.
Not even any condensers.

Dale

# 2351. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 19:48:46 UTC
From: Dale Parfitt <parinc1@verizon.net>
Message-ID: <yWu6l.2013$BC4.1770@nwrddc02.gnilink.net>
Source record: 3538

"M0WYM" <Sansspam@peartreegreen.org> wrote in message
news:gjdogs$9at$1@news.albasani.net...
> M0WYM wrote:
>
>>
>> That is neat but it works out as over ?200 here
>
> Just seen an add for it in this months RadCom, Martin Lynch has it at
> ?259.95 ($426)!
>
>
> Charlie.
>
> --
> M0WYM

For what it does- that's a great price.
I have $14K in my HP.
Dale

Dale W4OP

# 2352. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 19:51:21 UTC
From: Bill M <radioexray@geemail.com>
Message-ID: <gjdu3r0k77@news5.newsguy.com>
Source record: 3539

Dale Parfitt wrote:
> "M0WYM" <Sansspam@peartreegreen.org> wrote in message
> news:gjdogs$9at$1@news.albasani.net...
>> M0WYM wrote:
>>
>>> That is neat but it works out as over ï¿½200 here
>> Just seen an add for it in this months RadCom, Martin Lynch has it at
>> ï¿½259.95 ($426)!
>>
>>
>> Charlie.
>>
>> --
>> M0WYM
>
> For what it does- that's a great price.
> I have $14K in my HP.
> Dale
>
> Dale W4OP
>
>

Wow!

-ex

# 2353. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 19:58:02 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <f56bd8a4-ca56-4c81-958b-f1f1a6a66023@z27g2000prd.googlegroups.com>
Source record: 3540

On Dec 30, 8:08 am, M0WYM <Sanss...@peartreegreen.org> wrote:
> I wonder if anyone knows of a project or kit that uses a 'scope
> timebase output as the basis of an HF spectrum analyser. My aim is
> to make something that would be useful for filter work so I'm not
> necessarily looking for very wide frequency sweep.
>
> TIA,
>
> Charlie.

For filter work, I think you probably want a "sweep generator", not a "spectrum analyzer". Many of the elements are the same but a sweep generator is a far less ambitious project that is probably what you want for alignments and filter design.

Tim N3QE

# 2354. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 21:39:50 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <Byw6l.57951$sC4.57187@newsfe04.iad>
Source record: 3541

"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
news:f56bd8a4-ca56-4c81-958b-f1f1a6a66023@z27g2000prd.googlegroups.com...
> Charlie.

For filter work, I think you probably want a "sweep generator", not a
"spectrum analyzer". Many of the elements are the same but a sweep
generator is a far less ambitious project that is probably what you
want for alignments and filter design.

Tim N3QE

I would think a good SA with a tracking generator would be
cat's meow. I wonder how a flat noise source would work
in lieu of the TG to plot filter responses on a SA?

## 2355. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 22:54:32 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <WCx6l.495$3y5.269@bignews4.bellsouth.net>
Source record: 3542

Tio Pedro wrote:
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:Eqt6l.429$Y32.30@bignews8.bellsouth.net...
>> > Even with it's 'hard vacuum' the 01 didn't have as good a 'getter' as
>> later tubes and would arc over with more than 130 volts or so. It was
>> used as a transmitter before the type 202 tube became widely available,
>> but was a QRP thing, less than a watt input.
>
> Will it have enough output to drive a 245?
>
>
I'm sure it will drive a neutralized 245 to provide some gain.
You might not get enough drive for full power output from the 245.
(even if the 245 was run in class A, which requires NO driving power
you would still see SOME power gain).

# 2356. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-30 23:03:24 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <B3sTuHg8iqWJFwM5@g3ohx.demon.co.uk>
Source record: 3543

In message <Byw6l.57951$sC4.57187@newsfe04.iad>, Tio Pedro
<radioconnection@cox.net> writes
>
>"Tim Shoppa" <shoppa@trailing-edge.com> wrote in message
>news:f56bd8a4-ca56-4c81-958b-f1f1a6a66023@z27g2000prd.googlegroups.com...
> > Charlie.
>
>For filter work, I think you probably want a "sweep generator", not a
>"spectrum analyzer". Many of the elements are the same but a sweep
>generator is a far less ambitious project that is probably what you
>want for alignments and filter design.
>
>Tim N3QE
>
>I would think a good SA with a tracking generator would be
>cat's meow. I wonder how a flat noise source would work
>in lieu of the TG to plot filter responses on a SA?
>
A flat noise generator does indeed work well as a wideband signal
source. However, to make sense of the trace, the spectrum analyser needs
a lot of lowpass filtering of the signal (after detection). This is
averages the spiky noise signal. Most modern digital analysers do have
an 'averaging' function but, on the older 'analogue' analysers,
filtering works fine. You would normally the maximum filtering possible
- typically 100 or 30Hz.
--
Ian

# 2357. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 02:18:26 UTC
From: Lynn <coffelt2@comcast.net>
Message-ID: <kKKdnVTSmMnkS8fUnZ2dnUVZ_rydnZ2d@giganews.com>
Source record: 3544

"Tio Pedro" <radioconnection@cox.net> wrote in message
news:6Du6l.44247$an4.16900@newsfe08.iad...
>
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:Eqt6l.429$Y32.30@bignews8.bellsouth.net...
>> > Even with it's 'hard vacuum' the 01 didn't have as good a 'getter' as
>> later tubes and would arc over with more than 130 volts or so. It was
>> used as a transmitter before the type 202 tube became widely available,
>> but was a QRP thing, less than a watt input.
>
> Will it have enough output to drive a 245?
I doubt it very seriously. I suppose if perfection was achieved in matching
the 01's output to the 245's grid was possible (I, for one cannot do it),
the losses would be enough to tickle it into the beginning of class C.

Ken's idea of going to class A might work, but the 245 would be running
in a very inefficient mode. There is one website showing a couple of
45's running in AB2 (how do you make a sub 2?) . Another website
has some interesting stuff with 245 chatter..... (you may have already
seen it, but just in case.....

http://www.antiquewireless.org/otb/29amp.htm

Old Chief Lynn, W7LTQ and a couple commercials

# 2358. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 03:18:01 UTC
From: Bill M <radioexray@geemail.com>
Message-ID: <gjeo9b01e6v@news1.newsguy.com>
Source record: 3545

Lynn wrote:
>

>
> Ken's idea of going to class A might work, but the 245 would be running
> in a very inefficient mode.

I can't fathom a 20s xmtr circuit running the PA in Class A.

-ex

# 2359. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 09:26:37 UTC
From: Bob <biascomms@invalid.inv>
Message-ID: <6s0s5vF3obpcU1@mid.individual.net>
Source record: 3546

M0WYM wrote:

> M0WYM wrote:
>
>>
>> That is neat but it works out as over £200 here
>
> Just seen an add for it in this months RadCom, Martin Lynch has it
> at £259.95 ($426)!
>
>
> Charlie.

That's a pretty good price, but if you're prepared to import it yourself, you can save some money. My HP and Avantek SAs cost over £35000 together!

Bob

# 2360. Re: Spectrum Analyser Using Tek 465

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 13:53:01 UTC
From: Tim Shoppa <shoppa@trailing-edge.com>
Message-ID: <f4036645-544b-4395-992c-5011f8ca9028@v15g2000yqn.googlegroups.com>
Source record: 3547

On Dec 30, 4:39 pm, "Tio Pedro" <radioconnect...@cox.net> wrote:
> "TimShoppa" <sho...@trailing-edge.com> wrote in message
>
> news:f56bd8a4-ca56-4c81-958b-f1f1a6a66023@z27g2000prd.googlegroups.com...
> > Charlie.
>
> For filter work, I think you probably want a "sweep generator", not a
> "spectrum analyzer". Many of the elements are the same but a sweep
> generator is a far less ambitious project that is probably what you
> want for alignments and filter design.
>
> Tim N3QE
>
> I would think a good SA with a tracking generator would be
> cat's meow.

Well, yeah, if you can swing it. But a sweep generator is more than sufficient for filter design and alignments. And every decent radio/TV repair shop had one already meaning they show up really really cheap on E-bay or hamfests a lot. Or you can homebrew a sweep generator (see EMRFD or a ARRL handbook) out of junk box parts for your particular band of interest.

Tim N3QE

## 2361. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 17:33:09 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <c%N6l.828$rF5.804@bignews6.bellsouth.net>
Source record: 3548

Lynn wrote:
>
> "Tio Pedro" <radioconnection@cox.net> wrote in message
> news:6Du6l.44247$an4.16900@newsfe08.iad...
>>
>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>> news:Eqt6l.429$Y32.30@bignews8.bellsouth.net...
>>> > Even with it's 'hard vacuum' the 01 didn't have as good a 'getter'
>>> as later tubes and would arc over with more than 130 volts or so. It
>>> was used as a transmitter before the type 202 tube became widely
>>> available, but was a QRP thing, less than a watt input.
>>
>> Will it have enough output to drive a 245?
> I doubt it very seriously. I suppose if perfection was achieved in matching
> the 01's output to the 245's grid was possible (I, for one cannot do it),
> the losses would be enough to tickle it into the beginning of class C.
>
> Ken's idea of going to class A might work, but the 245 would be running
> in a very inefficient mode. There is one website showing a couple of
> 45's running in AB2 (how do you make a sub 2?) . Another website
> has some interesting stuff with 245 chatter..... (you may have already
> seen it, but just in case.........
>
> http://www.antiquewireless.org/otb/29amp.htm
>
> Old Chief Lynn, W7LTQ and a couple commercials
Actually AB1 would be better. My point was that you don't need driving
power until you start drawing grid current. As long as the final
doesn't draw grid current you are not loading down the oscillator tube.
The question was would the 01A be able to drive a '45. My answer is
yes, but probably not to full output....meaning you won't be able to
supply much grid current.

## 2362. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 18:29:42 UTC
From: Lynn <coffelt2@comcast.net>
Message-ID: <Q-mdnXCTJryEJ8bUnZ2dnUVZ_t3inZ2d@giganews.com>
Source record: 3549

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:c%N6l.828$rF5.804@bignews6.bellsouth.net...
> Lynn wrote:
>>
>> "Tio Pedro" <radioconnection@cox.net> wrote in message
>> news:6Du6l.44247$an4.16900@newsfe08.iad...
>>>
>>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>>> news:Eqt6l.429$Y32.30@bignews8.bellsouth.net...
>>>> > Even with it's 'hard vacuum' the 01 didn't have as good a 'getter'
>>>> as later tubes and would arc over with more than 130 volts or so. It
>>>> was used as a transmitter before the type 202 tube became widely
>>>> available, but was a QRP thing, less than a watt input.
>>>
>>> Will it have enough output to drive a 245?
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>> matching
>> the 01's output to the 245's grid was possible (I, for one cannot do it),
>> the losses would be enough to tickle it into the beginning of class C.
>>
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>> in a very inefficient mode. There is one website showing a couple of
>> 45's running in AB2 (how do you make a sub 2?) . Another website
>> has some interesting stuff with 245 chatter..... (you may have already
>> seen it, but just in case.........
>>
>> http://www.antiquewireless.org/otb/29amp.htm
>>
>> Old Chief Lynn, W7LTQ and a couple commercials
> Actually AB1 would be better. My point was that you don't need driving
> power until you start drawing grid current. As long as the final doesn't
> draw grid current you are not loading down the oscillator tube.
> The question was would the 01A be able to drive a '45. My answer is yes,
> but probably not to full output....meaning you won't be able to supply
> much grid current

Yor're correct (as qualified, and as usual)
But the 01A is NOT a suitable (satisfactory?) driver
for a 45.

Happy New Year! (Will I see any of you on "Straight Key Night?(

Old Chief Lynn

## 2363. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 19:05:39 UTC
From: ken scharf <wa2mzeNOSPAMBOTS@bellsouth.net>
Message-ID: <sgP6l.825$vs6.577@bignews7.bellsouth.net>
Source record: 3550

```
Lynn wrote:
>
> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
> news:c%N6l.828$rF5.804@bignews6.bellsouth.net...
>> Lynn wrote:
>>>
>>> "Tio Pedro" <radioconnection@cox.net> wrote in message
>>> news:6Du6l.44247$an4.16900@newsfe08.iad...
>>>>
>>>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>>>> news:Eqt6l.429$Y32.30@bignews8.bellsouth.net...
>>>>> > Even with it's 'hard vacuum' the 01 didn't have as good a
>>>>> 'getter' as later tubes and would arc over with more than 130 volts
>>>>> or so. It was used as a transmitter before the type 202 tube
>>>>> became widely available, but was a QRP thing, less than a watt input.
>>>>
>>>> Will it have enough output to drive a 245?
>>> I doubt it very seriously. I suppose if perfection was achieved in
>>> matching
>>> the 01's output to the 245's grid was possible (I, for one cannot do
>>> it),
>>> the losses would be enough to tickle it into the beginning of class C.
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>>> Ken's idea of going to class A might work, but the 245 would be running
>>> in a very inefficient mode. There is one website showing a couple of
>>> 45's running in AB2 (how do you make a sub 2?) . Another website
>>> has some interesting stuff with 245 chatter..... (you may have already
>>> seen it, but just in case.........
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>>> http://www.antiquewireless.org/otb/29amp.htm
>>>
>>> Old Chief Lynn, W7LTQ and a couple commercials
>> Actually AB1 would be better. My point was that you don't need
>> driving power until you start drawing grid current. As long as the
>> final doesn't draw grid current you are not loading down the
>> oscillator tube.
>> The question was would the 01A be able to drive a '45. My answer is
>> yes, but probably not to full output....meaning you won't be able to
>> supply much grid current
>
> Yor're correct (as qualified, and as usual)
> But the 01A is NOT a suitable (satisfactory?) driver
> for a 45.
>
```

> Happy New Year! (Will I see any of you on "Straight Key Night?(
>
> Old Chief Lynn

Well the original question was would it work, and the answer is yes, but not very well.

If you want to use tubes from the same era, then I'd pick a '27 for the oscillator. The 27 is probably the first tube in a chain of evolution that led up to the 1626 which was used for the same purpose in the ARC-5 transmitters. (though the 1625 is a heck of a lot easier to drive than a '45!).

## 2364. Re: You know your passenger is a geek when ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 19:58:14 UTC
From: no <no@no.com>
Message-ID: <p9Q6l.11888$c45.10252@nlpi065.nbdc.sbc.com>
Source record: 3359

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:a286l.14052$M01.5666@bignews3.bellsouth.net...
> JIMMIE wrote:
>> On Dec 26, 9:36 pm, "no" <n...@no.com> wrote:
>>> He notices that the digital display on your dash is a clock set to GMT.
>>
>> My daughter must think Im a geek, She gave me a "Fibonacci as easy as
>> 1,1,2,3,....." T shirt for Xmas.
>>
>> Jimmie
> I remember seeing a T shirt with "...as easy as Pi" someplace. Same idea.

Last year I gave my wife a shirt that said "if you're not part of the solution, you're part of the precipitate." (She's a biologist) and my son got "I'm as [Gaussian distribution equation] as anyone," both from Thinkgeek.com.

I saw plans for a one-button Morse Code electronic combination lock once, but never got around to making one. Also, it would be nice if someone made a Java ap. that allowed text entry via Morse code. My daughter can type fast and accurately without looking using T9 on the keypad, but I always end up with the wrong ambiguous word (e. g. "good" in place of "home") in my messages.

## 2365. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 21:57:19 UTC
From: Lynn <coffelt2@comcast.net>
Message-ID: <HeednVuz9LWYdsbUnZ2dnUVZ_u6dnZ2d@giganews.com>
Source record: 3360

```
"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
news:sgP6l.825$vs6.577@bignews7.bellsouth.net...
> Lynn wrote:
>>
>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>> news:c%N6l.828$rF5.804@bignews6.bellsouth.net...
>>> Lynn wrote:
>>>>
>>>> "Tio Pedro" <radioconnection@cox.net> wrote in message
>>>> news:6Du6l.44247$an4.16900@newsfe08.iad...
>>>>>
>>>>> "ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message
>>>>> news:Eqt6l.429$Y32.30@bignews8.bellsouth.net...
>>>>>> > Even with it's 'hard vacuum' the 01 didn't have as good a 'getter'
>>>>>> as later tubes and would arc over with more than 130 volts or so. It
>>>>>> was used as a transmitter before the type 202 tube became widely
>>>>>> available, but was a QRP thing, less than a watt input.
>>>>>
>>>>> Will it have enough output to drive a 245?
>>>> I doubt it very seriously. I suppose if perfection was achieved in
>>>> matching
>>>> the 01's output to the 245's grid was possible (I, for one cannot do
>>>> it),
>>>> the losses would be enough to tickle it into the beginning of class C.
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>>>> Ken's idea of going to class A might work, but the 245 would be running
>>>> in a very inefficient mode. There is one website showing a couple of
>>>> 45's running in AB2 (how do you make a sub 2?) . Another website
>>>> has some interesting stuff with 245 chatter..... (you may have already
>>>> seen it, but just in case.........
>>>>
>>>> http://www.antiquewireless.org/otb/29amp.htm
>>>>
>>>> Old Chief Lynn, W7LTQ and a couple commercials
>>> Actually AB1 would be better. My point was that you don't need driving
>>> power until you start drawing grid current. As long as the final
>>> doesn't draw grid current you are not loading down the oscillator tube.
>>> The question was would the 01A be able to drive a '45. My answer is
>>> yes, but probably not to full output....meaning you won't be able to
>>> supply much grid current
>>
>> Yor're correct (as qualified, and as usual)
>> But the 01A is NOT a suitable (satisfactory?) driver
>> for a 45.
```

>>
>> Happy New Year! (Will I see any of you on "Straight Key Night?(
>>
>> Old Chief Lynn
> Well the original question was would it work, and the answer is yes, but
> not very well.
>
> If you want to use tubes from the same era, then I'd pick a '27 for the
> oscillator. The 27 is probably the first tube in a chain of evolution
> that led up to the 1626 which was used for the same purpose in the ARC-5
> transmitters. (though the 1625 is a heck of a lot easier to drive than a
> '45!).

Right again, Ken. Those ARC-5's were sure a lot of fun when new ones were $5 a crack! Used one for VFO on a BC-375 when the'375 was $45, new, complete with all tuning units, dynamotor, antenna tuner, antenna switch with RF ammeter, etc! Glory days of radio. If one didn't mind a little "yooooooop de yoooop yoooop" on CW, the 211 in the '375 in MOPA mode made a nice oscillator tube as well!

Old Chief Lynn

# 2366. Re: 01 tube as RF amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2008-12-31 21:58:50 UTC
From: Tio Pedro <radioconnection@cox.net>
Message-ID: <lWR6l.13472$4u2.13449@newsfe02.iad>
Source record: 3361

"ken scharf" <wa2mzeNOSPAMBOTS@bellsouth.net> wrote in message > If you want to use tubes from the same era, then I'd pick a '27 for the
> oscillator. The 27 is probably the first tube in a chain of evolution
> that led up to the 1626 which was used for the same purpose in the ARC-5
> transmitters. (though the 1625 is a heck of a lot easier to drive than a
> '45!).
>

I agree Ken. A lot of the early 30s rigs used a tetrode driving a 45.
I'll have to dig deeper. (Looking for retirement projects!)
I saw a neat design using a pair of 30s to drive a P-P pair of 33s in one battery TX QST ran in 32 or so.

Pete